AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF PAGES
	1	3

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
0002	7/10/01		

6. ISSUED BY CODE

U. S. Army Engineer District, Honolulu
Attn: CEPOH-CT-C
Building 230
Fort Shafter, Hawaii 96858-5440

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

CODE FACILITY CODE

(√) 9A. AMENDMENT OF SOLICITATION NO.

X DACA83-01-R-0017

9B. DATED *(SEE ITEM 11)* 5/11/01

10A. MODIFICATION OF CONTRACTS/ORDER NO.

10B. DATED *(SEE ITEM 13)*

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(√) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Design-Build FY01 MCA PN 52265 and BUP PN 52266 , Whole Barracks Renewal, Phase 4A, Renovation of Quad F, Schofield Barracks, Oahu, Hawaii

See attached pages.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY *(Signature of Contracting Officer)*	16C. DATE SIGNED

1. Attached hereto are revised and new pages to Sections 00010, 00120, 00600, 00800, 00900, and 01010. The revision mark "(AM-0002)" is shown on each page.

a. REVISED PAGES. The following are revised pages to the solicitation. Changes are indicated in bold.

Section 00010: Page 1
SF1442, Blocks 13A and 13D are revised

Section 00120: Pages 1-13
Paragraphs 2.3.1.2, 4.4.1, and 4.4.1.1.1 are revised

Section 00600: Pages 1-11
52.219-1, Small Business Program Representations (May 2001) Alternate I (Oct 2000) Alternate II (Oct 2000) is revised

Section 00800: Pages 1-21
S-1a, Reporting of Contractor Manpower Data Elements (Feb 2001) is deleted.

Section 01010: The following are revised paragraphs to the specifications. Changes are indicated in bold. The following are new and revised paragraphs to the specification.

1. Design Objectives: 1.1, 1.2.6.3,

2. General Design - Civil: 2.4.5.1, 2.4.5.2, 2.4.5.3, 2.4.6.2.3, 2.4.7.3.2.1, 2.5.5.2.a, 2.5.5.2.b, 2.6.1.1, 2.6.1.2, 2.6.1.3, Table 2-3, 2.6.15, 2.6.15.1, 2.6.15.2,

3. General Design - Structural: 3.4, 3.6, 3.6.1.1, 3.6.1.1.1, 3.6.1.1.2, 3.6.1.1.3, 3.6.1.1.4, 3.6.1.1.5, 3.6.3, 3.6.4,

6. General Design - Plumbing: 6.8

7. General Design Electrical: 7.1.5, 7.1.9, 7.1.13, 7.1.19, 7.2, 7.2.1, 7.2.1.1, 7.2.1.1.b, 7.2.1.1.e, 7.2.1.1.g, 7.2.1.1.i, 7.2.2, 7.2.3, 7.3, 7.4.5, 7.5.1, 7.5.2, 7.5.5, 7.5.6.2, 7.5.6.3, 7.5.6.4, 7.5.6.5, 7.5.6.7, 7.6.2, 7.6.4, 7.6.7.2, 7.6.7.4

b. NEW PAGES. The following pages are added to the solicitation.

Section 00900
Table of Contents
Attachment 17
Attachment 20
Attachment 26
Attachment 27
Attachment 28

c. DELETED PAGES. The following pages are deleted from the specifications:

Section 00900
Table of Contents
Attachment 17
Attachment 26

2. DRAWING FILES ADDED. Microstation format CADD files provided with this amendment are for information only. Files 01sb07c1.dgn, 01sb07c2.dgn, and 01sb07c3.dgn are the main files showing the civil site layout. All other CADD files provided are reference files that these main files use.

3. The hour and date specified for receipt of Offers is extended. Offers are due July 31, 2001, 2:00 p.m. (Hawaii Standard Time).

SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES
	DACA83-01-R-0017	☐ SEALED BID *(IFB)* ☒ NEGOTIATED *(RFP)*	5/11/01	1

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.

7. ISSUED BY CODE	8. ADDRESS OFFER TO
U. S. Army Engineer District, Honolulu Attn: CEPOH-CT-C Building 230 Fort Shafter, Hawaii 96858-5440	U. S. Army Engineer District, Honolulu Attn: CEPOH-CT-C Building 230 Fort Shafter, Hawaii 96858-5440 (Deliver hand-carried proposals to Building 200, Fort Shafter, Hawaii)

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code) (NO COLLECT CALLS)*
	Lynn Arakaki	(808)438-8564

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date):*

Design-Build FY01 MCA PN 52265 and BUP PN 52266, Whole Barracks Renewal, Phase 4A, Renovation of Quad F, Schofield Barracks, Oahu, Hawaii

*See Section 700, DB-7

11. The Contractor shall begin performance within 7 calendar days and complete it within * calendar days after receiving ☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. *(See* Section 700, DB-7 .*)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES," indicate within how may calendar days after award in Item 12B.)*	12B. CALENDAR DAYS
☒ YES ☐ NO	14

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 2 copies to perform the work required are due at the place specified in Item 8 by 2:00pm HST *(hour)* local time 7/31/01 *(date).* If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NO. *(Include area code)*
Duns No._____ CAGE Code_____	16. REMITTANCE ADDRESS *(Include only if different than Item 14)*
CODE FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.*

AMOUNTS ▶

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*	20B. SIGNATURE	20C. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 Copies unless otherwise specified)* ▶	ITEM 26	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C 2304(c) ( ) ☐ 41 U.S.C 253(c) ( )
26. ADMINISTERED BY CODE U. S. Army Engineer District, Honolulu Schofield Barracks Resident Office Building 230 Fort Shafter, Hawaii 96858-5440		27. PAYMENT WILL BE MADE BY U. S. Army Engineer District, Honolulu Finance and Accounting Branch (CEPOH-RM-F) Building 230 Fort Shafter, Hawaii 96858-5440

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *Contractor is required to sign this document and return* _____ *copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.

☐ 29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*		31A. NAME OF CONTRACTING OFFICER *(Type or print)*	
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

SECTION 00120
EVALUATION FACTORS FOR AWARD
AND PROPOSAL SUBMISSION REQUIREMENTS

1. General

1.1. Cost of Preparing Proposals: The Government will not reimburse any Offeror it's costs incurred in submitting an offer in response to this solicitation.

1.2. Inquires: Address all inquiries regarding this Request for Proposals to:

U.S. Army Engineer District, Honolulu
Attn: Ms. Lynn Arakaki (CEPOH-CT-C)
Building S-200
Fort Shafter, Hawaii 96858-5440
Phone No. (808) 438-8564
Fax No. (808) 438-8588
E-Mail: lynn.arakaki@usace.army.mil

1.3. Proposal Submission and Sequence of Evaluation:

1.3.1. Evaluation Process. Numerical scores and other point-scoring techniques will not be used in the evaluation process. Each proposal shall be rated on an adjectival rating system. The Government will evaluate offers in accordance with NON-PRICE EVALUATION FACTORS (the technical proposal) and the offeror's price, as set forth in this Provision. During proposal evaluation, the NON-PRICE EVALUATION FACTORS will be evaluated by a Source Evaluation Board (SEB) utilizing an adjectival rating method described below.

1.3.1.1. Rating Method.

1.3.1.1.1. Performance Risk. The Past Performance evaluation will assess the risks associated with each offeror's likelihood of success in performing the requirements stated in the RFP based on that offeror's demonstrated past performance on recent, relevant contracts.

ASSESSMENT	PERFORMANCE RISK DEFINITION
Very Low Risk	Offeror's past performance record provides essentially no doubt that the offeror will successfully perform the required effort.
Low Risk	Offeror's past performance record provides little doubt that the offeror will successfully perform the required effort.
Moderate Risk	Offeror's past performance record provides some doubt that the offeror will successfully perform the required effort.
High Risk	Offeror's past performance record provides substantial doubt that the offeror will successfully perform the required effort.
Very High Risk	Offeror's past performance record provides extreme doubt that the offeror will successfully perform the required effort.
Neutral Risk	The offeror has no relevant performance record. The offeror has not provided past performance information and/or Government was unable to find any past performance information.

1.3.1.1.2. Technical Merit. Each proposal shall be evaluated on technical merit. These evaluations reflect the Government's confidence in each offeror's ability, as demonstrated in its' proposal, to perform the requirements stated in the RFP. The following adjectival ratings and description will be used to evaluate each non-price factor except Past Performance as noted above:

EVALUATION	TECHNICAL MERIT DEFINITION
Excellent	The proposal is outstanding; proposal demonstrates excellent understanding of requirements and greatly exceeds the Government's minimum requirements. Offeror's proposed capability or proposed effort is of the highest quality and thoroughly justified or substantiated. Total internal consistency and no incompatibility with other portions of proposed efforts. Proposal has significant strength(s) in meeting the Request for Proposal (RFP) requirements, which is not offset by a weakness(es).
Highly Acceptable	Proposal is good; proposal demonstrates good understanding of requirements and exceeds the Government's minimum requirements. Offeror's proposed capability or proposed effort is high quality and well justified or substantiated. No or very minor inconsistencies or incompatibilities with other portions of proposed efforts. Proposal has a strength(s) in meeting the requirements of the RFP, which is not offset by a weakness(es) or has only minor weakness(es).
Acceptable	Proposal is acceptable; proposal demonstrates acceptable understanding of requirements and meets the Government's minimum requirements. Offeror's proposed capability or proposed effort is of an acceptable level of quality and justified or substantiated. No significant inconsistencies or incompatibilities with other portions of proposed efforts. Proposal may have a strength(s) in meeting the requirements of the RFP and/or may have a weakness(es).
Marginal	Proposal is susceptible for improvement; proposal demonstrates shallow understanding of requirements; Government's minimum requirements are not met. Insufficient evidence that offeror's proposed capability or proposed effort is of an acceptable level of quality. Inconsistencies and incompatibilities with other portions of the proposal exist. Proposal may have a strength(s) in meeting the requirements of the RFP; however, they are offset by either significant weakness(es), and deficiency(ies). Although a major rewrite is not required, substantial revisions are required to correct weakness(es) and deficiency(ies) to make the proposal acceptable.
Unsatisfactory	Proposal is unacceptable; Government's minimum requirements are not met and substantial effort would be required to meet the Government's minimum requirements. The Offeror's proposal lacks evidence of capability to perform proposed effort. Numerous major inconsistencies, weaknesses, and significant deficiency(ies). Proposal has minimal or no chance of success; correction would require extensive revision, a major rewrite, to be rated as acceptable.

1.3.1.1.3. Proposal Risk. Each non-price evaluation factor, except Past Performance, will be evaluated for degree of risk and will be rated using the following ratings and descriptions:

ASSESSMENT	PROPOSAL RISK DEFINITION
Low Risk	Any proposal weaknesses have little potential to cause disruption of schedule, increase in cost, or degradation of performance. Normal contractor effort and normal Government monitoring will probably minimize any difficulties.
Moderate Risk	Proposal has weaknesses that can potentially cause some disruption of schedule, increase in cost, or degradation of performance. However, special contractor emphasis and close Government monitoring will probably minimize difficulties.
High Risk	Proposal has weaknesses that have the potential to cause serious disruption of schedule, increase in cost, or degradation of performance even with special contractor emphasis and close Government monitoring.

1.3.2. The Offeror's price proposal will be evaluated, separately from the offeror's technical proposal. The Government shall compare the competing prices proposed by all the offerors, together with the Government's Estimate, to establish price reasonableness. Cost analysis will not likely be performed under this solicitation, however, the offerors' price breakdown will be evaluated.

1.3.3. Upon completion of separate evaluation of all technical and price proposals, the SEB will then evaluate each Offeror's technical and price proposal together, determining the relative strengths, deficiencies, significant weaknesses and risks that each total proposal presents to the Government. The Government will make award to the Offeror whose proposal represents the best value to the government, considering both price and non-price factors. In its evaluation of all the offers, the Government will weight price and technical offers approximately equally, but may give greater consideration to technical factors when price offers tend to be equal and may give greater consideration to price when technical offers tend to be equal.

1.3.4. Upon completion of evaluation of all proposals and their ranking, the Contracting Officer will, in accordance with the provisions of this solicitation and applicable acquisition regulations, proceed to award without discussions. Offerors are advised that the Government intends to award without discussions. However, if discussions are determined to be necessary, the Contracting Officer will establish a competitive range and conduct discussions with those Offerors within the competitive range. Upon conclusion of discussions, if necessary, the Contracting Officer will request final proposal revisions from the Offerors remaining in the competitive range and may, upon receipt of final proposal revisions, proceed to award a contract without further discussions or notice.

2. Proposal Submission Requirements.

2.1. General Requirements for Proposals:

2.1.1. Submission requirements for proposals.

2.1.1.1 Technical Proposals. Submit one (1) original proposal and four (4) copies, in the format for Technical Proposals as set forth in this Provision.

2.1.1.2 Price Proposals.

2.1.1.2.1 Complete and submit one (1) original and two (2) copies of Section 00010, the Price Proposal Schedule, which is found in this solicitation.

2.1.1.2.2 Submit one (1) original and one (1) copy of the Offeror's Price Breakdown in the format as set forth in Attachment 1 to this section. Indicate on the Price Breakdown whether or not Facilities Capital Cost of Money is included in the contractor's costs of performing the work. Proposals that state that Facilities Capital Cost of Money is not included in the contractor's costs of performing the work—or proposals that don't state anything at all about Facilities Capital Cost of Money—will be deemed to have waived Facilities Capital Cost of Money.

2.1.1.2.3 Submit with the Price Proposal:

2.1.1.2.3.1 One (1) original and two (2) copies of the Offeror's completed Standard Form (SF) 1442, using a printed copy of the SF 1442 that has been issued under this solicitation;

2.1.1.2.3.2 One (1) copy (certified as a true copy) of the Offeror's executed joint venture agreement (if the Offeror is a joint venture);

2.1.1.2.3.3 One (1) copy of the Offeror's completed Section 00600, Representations and Certifications, using a printed copy of Section 00600 that has been issued under this solicitation; and

2.1.1.2.3.4 One (1) copy of the Offeror's completed (if applicable) SF LLL, Disclosure of Lobbying Activities, using a printed copy of the SF LLL which is found in Appendix A to Section 00600.

2.1.1.2.3.5 One (1) copy of the Offeror's Small Business Subcontracting Plan if the Offeror is a large business concern. A sample plan can be found in Appendix A to Section 00100.

2.2. Format Requirements for Proposals:

2.2.1 Any information, presented with a proposal that an Offeror wants to have safeguarded from disclosure to other parties must be identified and labeled in accordance with the requirements of Provision "52.215-1, Instructions to Offerors—Competitive Acquisition (Feb 2000)," subparagraph (e), which is found in Section 00100 of this solicitation. The Government will endeavor to honor the restrictions against release requested by Offerors, to the extent permitted under United States law and regulations.

2.2.2 Prepare proposals in the English language.

2.2.3 Type or print all information presented in the proposal, to the extent possible. Use clear, simple English letters and numbers. Laser printer-quality printing is adequate for the proposals. Elaborate calligraphy is not desired. Do not use size printing or typing less than 10 pitch (United States). Use black characters on white paper as much as possible. Color should be used for clarity, not for purposes of decoration. Do not use colors that do not reproduce legibly using standard office or commercial facsimile or copying machines. Prepare technical proposals on standard (United States), letter-sized (8.5 x 11 inches) or substantially similar international/metric-sized pages. Use only one side of the page. Use non-glossy paper of good weight and quality. Expensive or elaborate paper stock is not desired.

2.2.4 Submit proposal packages to the US Army Corps of Engineers ("the Government") as shown in Block 8 of Standard Form 1442.

2.2.5 Proposals received by the Government after the date and time set for receipt of proposals will be handled in accordance with the requirements of Provision "52.215-1, Instructions to Offerors—Competitive Acquisition (Feb 2000)," subparagraph (c), found in Section 00100.

2.3 Specific Requirements for Technical Proposals:

2.3.1 Submit technical proposals in a narrative format, organized and titled so that each section of the proposal follows the order and format of the factors and subfactors set forth below in paragraph 4, "Technical Evaluation Factors and Submission Requirements." Volume 1 shall consist of Evaluation Factors 1 and 2, Volume 2 shall consist of Evaluation Factor 3, Volume 3 shall consist of Evaluation Factor 4, and Volume 4 shall consist of Evaluation Factor 5.

2.3.1.1 Proposal clarity, organization and cross referencing is mandatory**.** Failure to submit and organize proposals as requested may adversely affect an offeror's evaluation. Offerors should provide sufficient detail and clearly define all items required in this section. Written portions of the proposal shall be on 8-1/2 by 11 inch paper with three holes punched, in a three-ring binder. Drawings shall be full-size bound separately. Offerors shall label and tab their proposals consistent with the requirements of this section. A table of contents shall be provided to facilitate review and cross referencing. The proposal shall have an index for each item submitted. Each page of the proposal shall have the page number on the bottom of the page starting with the first page to the last numbered consecutively.

2.3.1.2. Information and material should be arranged by discipline and include a narrative of offeror's design approach and unique design solutions.

2.3.1.3. Any deviations/betterments must be identified, described in detail, and quantified that the offeror is proposing above and beyond the minimum requirements of the RFP.

2.3.2 Information presented in the technical proposal should be sufficiently detailed in order to clearly describe how the technical proposal addresses the technical proposal evaluation factors. Professional looking and well organized (as opposed to poorly prepared and haphazardly organized) proposals will likely be considered to reflect more favorably on the capabilities of the Offeror; however, it is not the Government's intent to require elaborate "magazine-style" proposals. It is not necessary, nor desired, that Offerors prepare elaborate or lengthy proposals.

2.3.3 There is no limit to the size of technical proposals, or the amount of information that may be submitted to the Government. However, information should be concisely presented, to the extent possible. Information presented should be organized so as to pertain to only the evaluation factor or subfactor in which section the information is presented. Information pertaining to more than one evaluation factor or subfactor should be repeated for each factor or subfactor.

2.3.4 The proposal must set forth full, accurate, and complete information as required by this solicitation. The Government will rely on such information in the award of a contract. By submission of an offer, the Offeror agrees that all items in its proposal (key managerial and technical home office and on-site personnel, subcontractors, targets for utilization of eligible SDB concerns, etc.) will be used throughout the duration of the contract and any substitutions of items will require prior approval by the Contracting Officer.

3. Relative Weights of Technical Evaluation Factors.

3.1 When the technical proposal is evaluated as a whole, Evaluation Factors 1 through 5 are in descending order of importance.

3.1.1 Evaluation Factor 2 - Experience. Subfactor 2.1 is greater in weight than individual Subfactors 2.2 and 2.3. Subfactors 2.2 and 2.3 are equal in weight.

3.1.1.1 Subfactor 2.1.1 is greater in weight than Subfactor 2.1.2.

3.1.2 Evaluation Factor 3 - Technical Approach and Capabilities. Subfactor 3.1 is greater in weight than Subfactor 3.2. Subfactor 3.2 is greater in weight than individual Subfactors 3.3, 3.4, 3.5, 3.6, 3.7, and 3.8. Subfactors 3.3, 3.4, 3.5, 3.6, and 3.7 are equal in weight. Subfactor 3.8 is of least importance.

3.1.3 Evaluation Factor 4 - Management Approach and Capabilities. Subfactor 4.1 is equal in weight to 4.2. Subfactors 4.1 and 4.2 are greater in weight than individual Subfactors 4.3 and 4.4. Subfactors 4.3 and 4.4 are equal in weight.

3.1.3.1. Subfactor 4.1.1 and 4.1.2 are equal in weight.

3.1.3.2. Subfactor 4.2.1 and 4.2.2 are equal in weight.

3.1.3.3. Subfactor 4.3.1 and 4.3.2 are equal in weight.

3.1.3.4. Subfactor 4.4.1 and 4.4.2 are equal in weight.

3.1.4 Evaluation Factor 5 - Small Business Program. Subfactors 5.1, 5.2, and 5.4 are equally weighted. Subfactor 5.3 is greater in weight than individual Subfactors 5.1, 5.2, and 5.4.

3.1.4.1 Subfactor 5.3.1, 5.3.2, and 5.3.3 are equally weighted.

4. Technical Evaluation Factors and Submission Requirements

4.1. Evaluation Factor 1. - Offeror's past performance history in completing projects of similar scope, dollar value, and complexity during the past 5 years. The Government will evaluate each offeror's past performance to determine how well it satisfied its customers. The Government will contact some of each offeror's customers to assess the offeror's past performance on similar projects and may contact sources outside those listed by the contractor. An offeror's lack of past performance will be rated as no positive or negative evaluation significance. Offerors will be provided an opportunity to comment on negative past performance information on which the offeror has not previously had such an opportunity.

4.1.1 Submission requirements for Evaluation Factor 1 - Complete the form at Attachment 2 of this section for each relevant project (including projects with the Federal, State, and Municipal Governments and private industry).

4.2 Evaluation Factor 2 - Experience

4.2.1 Subfactor 2.1 - Design Build Experience. The Government will evaluate the depth and breadth of the offeror's experience on the basis of the number of times it has successfully performed projects that were similar in nature, size, scope, and complexity of the work. The following requested information shall be formatted per the sample (Attachment 3) provided at the end of this section.

4.2.1.1 Subfactor 2.1.1 - Similar Design Build Projects Completed.

4.2.1.1.1 Submission requirements for Evaluation Subfactor 2.1.1

- Describe similar Design Build projects completed.
  - Describe projects of similar scope (barracks, hotels, apartments, dormitories, administrative facilities, etc.), dollar value, and complexity, on-going or completed within the past 5 years.
  - State why or how the Offeror's experience with the described projects is relevant to the Offeror's expectation of successful completion of this project.
  - Documented successful completion with conformance to contract requirements, specifications, quality of design and workmanship, and customer satisfaction.

4.2.1.2. Subfactor 2.1.2 - Design Build Projects Completed.

4.2.1.2.1. Submission requirements for Evaluation Subfactor 2.1.2.

- Describe previous Design Build Projects Completed and discuss overall experience in Design Build contracting in the past five (5) years.

4.2.2. Subfactor 2.2 - Adherence to contract schedules, including the administrative aspects of performance.

4.2.2.1. Submission requirements for Evaluation Subfactor 2.2.

- Describe specific projects and provide examples supporting adherence to schedules and administrative aspects to support performance.

4.2.3 Subfactor 2.3 - History for reasonable and cooperative behavior with Contracting Officers, contract administrators. technical agents, and owners. Demonstrated commitment to customer satisfaction, timely award and management of subcontracts.

4.2.3.1. Submission requirements for Evaluation Subfactor 2.3.

- Describe specific projects and provide examples that indicate a history for reasonable and cooperative behavior with Contracting Officers, contract administrators. technical agents, and owners. Demonstrates commitment to customer satisfaction, timely award and management of subcontracts.

4.3. Evaluation Factor 3. - Technical Approach and Capabilities. The Government is interested in the offeror's approach to and plan for addressing each of the various issues presented. Therefore, responses should be complete, concise, and well thought out, demonstrating a thorough understanding of the project requirements described in this solicitation.

4.3.1. Subfactor 3.1 - Architectural Solutions.

4.3.1.1 Submission Requirement for Evaluation Subfactor 3.1:

- Provide 10 - 15% Conceptual Floor plans to indicate functional space arrangements are consistent with referenced design criteria for functional and operational relationships, fire protection, and life safety requirements and:

  - Floor plans of barracks are consistent and comply with referenced design criteria for room size, access (horizontal and vertical circulation), privacy, and control of heating and cooling in each room, closet size, and service area functionality.
  - Floor plans of other buildings are consistent and comply with referenced design criteria for functional and operational requirements, size, access (horizontal and vertical circulation), arrangement, and enhancements.

- Provide narrative description and/or catalog cut information of proposed interior finishes and accessories. Aesthetics, quality, and durability of materials are consistent with referenced design criteria.

4.3.2. Subfactor 3.2 - Historical Solutions.

4.3.2.1 Submission Requirement for Evaluation Subfactor 3.2.

- Provide a narrative description/solution on proposed use of innovative and efficient designs to protect significant historic structures and features as identified in the "Historic Architectural Survey for Significant Features in Quads B, C, D, E, & F and Condition Assessment of Quad F, Draft Report, February 2001".

4.3.3. Subfactor 3.3 - Civil Site Solutions.

4.3.3.1 Submission Requirement for Evaluation Subfactor 3.3.

- Provide a 10-15% Site Plan which indicates:

  - Water system connection point(s), layout, materials, sizes indicating compliance with specified requirements and relationship with site activities.

- Sewer system connection point(s), layout, materials, sizes indicating compliance with specified requirements, relationship with site activities.
- Grading and storm drainage system connection point(s), layout, materials, sizes indicating compliance with specified requirements, relationship with site activities.
- Landscaping to include the preservation of existing trees, use of native plants, planting design, and emphasis on building entry points, to include the use of recycled-content materials, recycling of plant material (tree stumps, and brush), and water conservation.
- Material selection (vapor barrier, GTB, geotextile, CWB) under new concrete slab-on-grade including typical sections and installation procedures.

4.3.4. Subfactor 3.4 - Structural Solutions.

4.3.4.1 Submission Requirement for Evaluation Subfactor 3.4

- Provide a narrative description/solution to indicate:

  - Compliance with applicable codes and stated criteria.
  - Use of innovative and efficient designs to incorporate antiterrorism/force protection retrofit and seismic rehabilitation requirements.
  - Proposed methods used to strengthen floor systems to support prescribed live loads, if strengthening is required.

4.3.5. Subfactor 3.5 - Mechanical Solutions.

4.3.5.1 Submission Requirements for Evaluation Subfactor 3.5.

- Provide a narrative description/solution to indicate:

  - Air Conditioning and Ventilation strategies proposed for each facility. System material selections will also be evaluated for quality and durability.
  - Hot Water heating strategy narratives proposed for each facility.
  - Energy conservation measures have been considered.

4.3.6. Subfactor 3.6 - Electrical Solutions.

4.3.6.1 Submission Requirements for Evaluation Subfactor 3.6.

- Provide a narrative description/solution to indicate:

  - Material selections, quality, aesthetics, durability, compliance with codes, and proposed methods of construction for the overall interior electrical system.
  - Point of connections, layout, materials, and conduit sizes comply with specified requirements, relationship with site activities and overall efficiency of the design for the overall exterior electrical distribution system.
  - System energy efficiency measures have been considered.

4.3.7. Subfactor 3.7 - Fire Protection Solutions.

4.3.7.1 Submission Requirements for Evaluation Subfactor 3.7.

- Provide a narrative description/solution to indicate acceptability, accessibility and maintainability in accordance with codes, conformance with the UBC, NFPA, and Military criteria/specifications.

4.3.8. Subfactor 3.8 - Environmental Solutions.

4.3.8.1 Submission Requirements for Evaluation Subfactor 3.8.

- Provide a narrative description/solution to indicate:

  - A thorough knowledge and understanding of mandatory regulatory requirements and guidelines.
  - Economical methods to mitigate hazardous materials that may be encountered during construction that comply with regulatory requirements and guidelines.

4.4. Evaluation Factor 4. Management Approach and Capabilities.

4.4.1. Subfactor 4.1. - Key Personnel Experience, qualifications, and organization. "Key personnel" are defined as, but not limited to, (1) Principal in Charge; **(2) Architect of Record; (3) Historic Architect;** (4) Civil Site Engineer; (5) Structural Engineer; (6) Mechanical Engineer; (7) Electrical Engineer; (8) Fire Protection Engineer; (9) Environmental Specialist; (10) Quality Control Engineer; and (10) Construction Manager.

4.4.1.1. Subfactor 4.1.1 - Experience and qualifications of the Offeror's proposed key managerial and technical home office and on-site personnel to be used for the project that demonstrate the Offeror's ability to provide quality work within the project completion period, for the price offered.

4.4.1.1.1. Submission Requirements for Evaluation Subfactor 4.1.1.

- Identify the key managerial and technical home office and on-site personnel who will be assigned to work under the contract.
- For each person so identified, provide a resume or other information that describes his or her qualifications for the job(s) that the person will be performing, including any special skills or experiences deemed worthy of note.
- Describe each person's familiarity with U.S. Government design and construction procedures, including Contractor Quality Control (CQC) procedures, if applicable to the position the person is to hold within the design build team organization.
- For all named, proposed subconsultants/subcontractors, provide the same information as required in the preceding paragraphs for the subconsultants/subcontractors' proposed key managerial and technical home office and on-site personnel. Regardless of the percentage of the work they may undertake, this evaluation factor applies to the entire design build team assembled to execute this project.
- **Describe how the Historic Architect meets the following requirements: (1) professional degree in architecture or State license to practice architecture; (2) at least one year of graduate study in architectural preservation, American architectural history, preservation planning, or closely related field; (3) at least one year of full-time professional experience on historic preservation projects; (4) undergraduate study or experience which includes detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specifications for preservation projects.**

4.4.1.2. Subfactor 4.1.2 - The Offeror's proposed home office and on-site organizational structure to be used under the contract that demonstrates the Offeror's ability to provide quality design and construction work within the contract completion time, for the price offered.

4.4.1.2.1. Submission Requirements for Evaluation Subfactor 4.1.2.

- Describe the proposed home office and job site organization.
- Describe how timeliness, quality and safety of the work at the job site, including the work of the subcontractors will be monitored and controlled.
- Incorporate into the description an organizational chart for home office and on-site managerial and technical staff, tying in the identities of the key managerial and technical personnel that are described in Subfactor 4.1.1. The chart shall illustrate/define management structure, lines of communication, and levels of authority of key personnel selected for this project with a narrative description which clearly/concisely defines areas of responsibility with respect to all facets of project development and execution.
- For all named, including proposed subconsultants/subcontractors, provide the same information as required in the preceding paragraphs for the subconsultants/subcontractors' proposed home office and on-site organization structure. Regardless of the percentage of the work they may undertake, this evaluation factor also applies to the entire design build team assembled to execute this project.

4.4.2. Subfactor 4.2. - Quality Control Plan.

4.4.2.1. Subfactor 4.2.1 - The Offeror's standard and specific quality control (QC) practices to be used to assure all services (designs, drawings, calculations, specifications, materials and construction practices) required by this solicitation are performed and provided in a manner that meets the project requirements.

4.4.2.1.1. Submission Requirements for Evaluation Subfactor 4.2.1

- Describe quality control practices to be established and used in all facets of project execution to ensure a successful quality project.

4.4.2.2. Subfactor 4.2.2. The offeror's QC team structure, task assignments, and areas of responsibility.

4.4.2.2.1. Submission Requirements for Evaluation Subfactor 4.2.2.

- Provide names, qualifications, duties, responsibilities and authority levels of each QC person. Provide task descriptions with individual(s) assignments. Indicate full and/or part-time duties with respect to monitoring, evaluating and overseeing, correcting critical areas of the project from start to completion.

4.4.3. Subfactor 4.3. - Preliminary Schedules.

4.4.3.1. Subfactor 4.3.1 Ability to meet or exceed the Government's construction completion time. A schedule which improves on the Government's construction performance time will be considered more favorably. The schedule will be evaluated for completeness, identification of specific milestones and phases for construction that portray a thorough understanding of design and construction practices, and will result in a quality project. Give special attention to the following:

- Events associated with coordinating the design submittals and the proper handling of review comments for each proposal item. For scheduling purposes, assume the Government review period will be 30 days each for the preliminary (35%), prefinal (90%) final (100%) and for the corrected final review.
- Permitting processes including milestones and time duration for obtaining permits. Offerors are advised that the process will take a minimum of 120 days.
- Construction phase for site work, utilities and each facility.
- Identify all "fast-tracking" of design and construction.
- O&M manual submission and required operator training.

- As-built submission.
- Turnover of facilities to include any proposed phased turnover, CQC completion and joint turnover inspections.
- Constraints on schedule (e.g. labor or material availability, weather, etc.).
- Indicate the critical path on the schedule.

4.4.3.1.1. Submission Requirements for Evaluation Subfactor 4.3.1.

- Provide a preliminary design and construction schedule using any commercially available project-scheduling program. The schedule shall be task oriented indicating the number of calendar days, after notice to proceed, by which milestones are to be achieved. Estimate the Notice to Proceed date to be September 28, 2001. Critical path or other method may be used, however, the anticipated critical path must be shown. All schedules shall be graphically represented. Show specific milestones and phases for construction that portray a thorough understanding of design and construction practices required for this project and which will result in a quality project. This preliminary schedule will be replaced after contract award with a final schedule as required by the contact

4.4.3.2. Subfactor 4.3.2. Scheduling capability and planning.

4.4.3.2.1. Submission Requirements for Evaluation Subfactor 4.3.2.

- Provide a narrative description of scheduling capability and software/hardware to be used. Include description on how schedule will be used, maintained/updated and adhered to with respect to project planning and execution.

4.4.4. Subfactor 4.4 - Safety Plan.

4.4.4.1 Subfactor 4.4.1 - Organizational Structure.

4.4.4.1.1. Submission Requirements for Evaluation Subfactor 4.4.1:

- Provide an organizational structure which identifies individuals with specific duties to administer and monitor safety rules, regulations, ensuring a safe working environment for contractor personnel, Government officials and others working in and near the job site.

4.4.4.2. Subfactor 4.4.2. - Personnel Qualifications.

4.4.4.2.1. Submission Requirements for Evaluation Subfactor 4.4.2.

- Provide qualifications of individuals, names, tasks, experience, knowledge and skills of safety personnel assigned to this project that will establish and maintain a rigorous safety program at the project site. The following must be addressed as a minimum: Minimum qualifications required for each position in the safety organization; any established proactive policy measures to prevent accidents and any initiatives used to encourage safety on the job site; compliance with EM 385-1-1 Safety - Safety and Health Requirements Manual including, but not limited to, national codes such as Electrical Safety Code; NFPA 101 Code for Safety to Life from Fire in Buildings and Structures; Occupational Safety and Health Act (OSHA); regulation CFR 29 Part 1910 Occupational Safety and Health Standards, etc.

4.5. Evaluation Factor 5 - Small Business Program.

4.5.1 Subfactor 5.1. - Extent of proposed participation of Small Businesses, Small Disadvantaged Business, Veteran-owned Small Business, HUBZone Small Business, Women-Owned Small Business concerns and Historically Black Colleges or Universities/Minority Institutions in the performance of the contract.

4.5.1.1 Submission Requirements for Evaluation Subfactor 5.1.

- Provide a list of names, addresses and telephone numbers of Small Businesses, Small Disadvantaged Businesses, Veteran-owned Small Businesses, HUBZone Small Businesses, Women-Owned Small Businesses and Historically Black Colleges or Universities/Minority Institutions which the Offeror proposes to use as a joint venture, teaming arrangement, or subcontractor if awarded a contract under this solicitation.
- Identify for each named proposed Small Business, Small Disadvantaged Business, Veteran-owned Small Business, HUBZone Small Business, Women-Owned Small Business, or Historically Black College or University/Minority Institution, whether the named party is a joint venture partner with the Offeror, has a teaming arrangement with the Offeror, or is a subcontractor of the Offeror.

Note: Incorporate the list of proposed subcontractors into the Offeror's Small Business Subcontracting Plan, which is required under Clause 52.219-9 Small Business Subcontracting Plan (Oct 2000), Alternate II (Oct 2000).

4.5.2 Subfactor 5.2. - Extent of participation of those proposed Small Businesses, Small Disadvantaged Business, Veteran-owned Small Business, HUBZone Small Businesses, Women-Owned Small Business concerns and Historically Black Colleges or Universities/Minority Institutions—listed under evaluation criteria 3.5.1 in terms of the value of the total acquisition.

4.5.2.1 Submission Requirements for Evaluation Subfactor 5.2 -

- For each proposed Small Businesses, Small Disadvantaged Business, Veteran-owned Small Business, HUBZone Small Business, Women-Owned Small Business concern or Historically Black College or Universities/Minority Institution, provide:
- The total estimated dollar amount of each proposed concern's joint venture or teaming arrangement share of contract proceeds or amount of the proposed concern's subcontract.
- The estimated percentage (expressed as a percentage of the overall proposed contract price) of the value of all proposed joint ventures, teaming arrangements or subcontracts with Small Businesses, Small Disadvantaged Businesses, Veteran-owned Small Businesses, HUBZone Small Businesses, Women-Owned Small Business concerns or Historically Black Colleges or Universities/Minority Institutions.

4.5.3 Subfactor 5.3. - Extent of participation of Eligible Small Disadvantaged Business concerns, in the performance of the contract.

Note: "Eligible Small Disadvantaged Business concerns" shall be those Small Disadvantaged Business concerns within industries identified in the Standard Industrial Classification (SIC) Major Groups, as determined by the Department of Commerce, in 64 FR 52806, September 30, 1999.

4.5.3.1 Subfactor 5.3.1 - Targets for utilization of Eligible Small Disadvantaged Business concerns, expressed as dollars and percentages of total contract value in each of the applicable authorized SIC Major Groups.

4.5.3.1.1 Submission Requirements for Evaluation Subfactor 5.3.1.

- Provide narrative statement, containing proposed targets, expressed as dollars and percentages of Offeror's proposed total contract price for each applicable authorized SIC Major Group, proposed for use under the contract. Identify any Eligible Small Disadvantaged Business concern proposed for subcontracting under the project.

4.5.3.2 Subfactor 5.3.2 - Small Disadvantaged Business participation by the contractor, including joint venture partners and team members.

4.5.3.2.1 Submission Requirements for Evaluation Subfactor 5.3.2.

- Submit a narrative statement identifying—if applicable—the Offeror's status as an Eligible Small Disadvantaged Business concern, or as a joint venture partnership or teaming arrangement containing Eligible Small Disadvantaged Business concerns. Identify all proposed joint venture partners or team members which are Eligible Small Disadvantaged Business concerns.

4.5.3.3 Subfactor 5.3.3 - Proposed Eligible Small Disadvantaged Business concern participation by subcontractors.

4.5.3.3.1 Submission Requirements for Evaluation Subfactor 5.3.3 - Submit a narrative statement identifying (if applicable) proposed Eligible Small Disadvantaged Business concerns with whom the Offeror intends to subcontract.

4.5.4 Subfactor 5.4 - Offeror's past performance history in complying with clauses at Federal Acquisition Regulation 52.219-8, Utilization of Small Business Concerns, and 52.219-9 II, Small Business Subcontracting Plan - Alternate II, during the past year.

4.5.4.1 Submission Requirements for Evaluation Subfactor 5.4

- Submit SF 294, Subcontracting Report for Individual Contracts (if applicable).

5. Price Performance Requirements. A price analysis will be performed to determine completeness, reasonableness, and understanding of the work. The evaluation will determine the adequacy of the offer in fulfilling the requirements of the proposal. Completeness addresses the extent to which the elements of the price proposal are in consonance with the requirements of the proposal and the adequacy of the coverage of the RFP. Reasonableness will be established using historical price information, price competition information, the IGE, and any other pricing tools necessary.

TABLE OF CONTENTS
SECTION 00600

SECTION 00600 Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contradictory to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as an agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above
_____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.
(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.
(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN:.----------

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other----------

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name----------

TIN----------
(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it ( ) is a women-owned business concern.

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (APR 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ( ) are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ( ) have not ( ), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ( ) has not ( ), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(D) Have ( ) have not ( ), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(E) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(D) of this provision.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror

to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.
(End of provision)

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclosure such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.
(End of provision)

252.209-7003 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (MAR 1998)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 37 U.S.C. 4212(d) (i.e., the VETS-100 report required by Federal Acquisition Regulation clause 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era), it has submitted the most recent report required by 38 U.S.C. 4212(d).

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS. (MAY 2001)--ALTERNATE I (OCT 2000) ALTERNATE II (OCT 2000)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 233320, Commercial and Institutional Building Construction.

(2) The small business size standard is $27.5 million.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) *Representations*. (1) The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) *[Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents, for general statistical purposes, that it ( ) is, ( ) is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) *[Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents as part of its offer that it ( ) is, ( ) is not a women-owned small business concern.

(4) *[Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents as part of its offer that it ( ) is, ( ) is not a veteran-owned small business concern.

(5) *[Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision*.] The offeror represents as part of its offer that it ( ) is, ( ) is not a service-disabled veteran-owned small business concern.

(6) *[Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.]* The offeror represents, as part of its offer, that -

(i) It ( ) is, ( ) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office of ownership, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ( ) is, ( ) is not a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. *[The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.]* Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) *[Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision*.] The offeror shall check the category in which its ownership falls:

_____ Black American.

_____ Hispanic American.

_____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

_____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

_____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

_____ Individual/concern, other than one of the pre-ceding.

(c) *Definition*s. As used in this provision—

“Service-disabled veteran-owned small business concern”—

(1) Means a small business concern—

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (a) of this provision.

“Veteran-owned small business concern” means a small business concern—

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 per-cent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans. “Women-owned small business concern” means a small business concern—

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) *Notic*e. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall—
(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.
(End of provision)

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [ ] is, [ ] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues

____ 50 or fewer ____ $1 million or less

____ 51 - 100 ____ $1,000,001 - $2 million

____ 101 - 250 ____ $2,000,001 - $3.5 million

____ 251 - 500 ____ $3,500,001 - $5 million

____ 501 - 750 ____ $5,000,001 - $10 million

____ 751 - 1,000 ____ $10,000,001 - $17 million

____ Over 1,000 ____ Over $17 million
(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) [ ] It has, [ ] has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) [ ] It has, [ ] has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.
(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

[ ] (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

[ ] (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

[ ] (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

[ ] (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

[ ] (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.
(End of provision)

S-7 IDENTIFICATION OF PARTNERS

(Applicable where the offeror has identified itself as a partnership or joint venture.)

The full names of all partners are listed below:

_____
_____
_____
_____
_____
_____

[End of Statement]

TABLE OF CONTENTS
SECTION 00800

~~S-1a~~	~~REPORTING OF CONTRACTOR MANPOWER DATA ELEMENTS (FEB 2001)~~
52.231-5000	EQUIPMENT OWNERSHIP - OPERATING EXPENSE SCHEDULE (MAR 1995) - EFARS
52-249-5000	BASIS FOR SETTLEMENT OF PROPOSALS
DB-1	LIMITATION OF PAYMENT FOR DESIGN
DB-2	ARCHITECTURAL DESIGNS AND DATA - GOVERNMENT RIGHTS (UNLIMITED) MARCH 1979
DB-3	PAYMENTS TO CONTRACTOR
DB-4	RESPONSIBILITY OF THE CONTRACTOR
DB-5	APPROVALS PRIOR TO CONSTRUCTION
DB-6	MANAGEMENT AT JOBSITE
DB-11	DESIGN-BUILD CONTRACT - ORDER OF PRECEDENCE
DB-12	PROPOSED BETTERMENTS
DB-13	KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS

Appendix A - Project Sign

SECTION 00800 Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

S-8 UTILITY OUTAGES

Utility outages shall be as hereinafter specified, unless otherwise indicated or specified. Interruptions to existing utilities shall be held to a minimum. Outages to facilitate connections to existing systems shall be scheduled to take place during periods of minimum demand. The Contractor shall submit a planned schedule of outages to the Contracting Officer for proper coordination with existing facilities, and shall notify the Contracting Officer in writing not less than 45 days in advance of the intended interruptions. Planned schedule of outages shall include specific dates, times, and anticipated duration of proposed outages. In the event the proposed outages interfere with station operations, the Contracting Officer will consider or offer alternate dates and/or times. Outages may be permitted during off-peak hours, hours of darkness, weekends, and holidays, at no additional cost to the Government. Work shall be planned to minimize outages. No utility outage will be permitted until the Contractor receives written approval from the Contracting Officer.

[End of Statement]

S-36.8 GROUND-FAULT CIRCUIT INTERRUPTERS

Ground-fault circuit interrupters for all 125-volt single phase 15- and 20-ampere receptacle outlets which are not part of the permanent wiring of the building or structure shall be provided by the Contractor in accordance with Section 305-6 of the 1999 National Electrical Code.

[End of Statement]

S-36.7 IDENTIFICATION OF EMPLOYEES

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work to display such identification as may be approved and directed by the Contracting Officer. All prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon the release of any employee. When required by the Contracting Officer, the Contractor shall obtain and submit fingerprints of all persons employed or to be employed on the project.

[End of Statement]

S-36.6 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in five (5) copies. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if after tests are performed on selected samples, the material is found not to meet the specific requirements.

[End of Statement]

S-36.5 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled DEFAULT (FIXED-PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

a. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

2. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON 5 DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	5	6	4	3	3	3	4	3	5	4	7

3. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on criticial activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph 2, above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled DEFAULT (FIXED-PRICE CONSTRUCTION). [ER 415-1-15, 31 Oct 89]

S-36.34 VEHICLE REGISTRATION

1. All vehicles operating on Army Installations must have a valid registration, valid certificate of insurance, current safety inspection and be operated by a licensed driver. Vehicle operators shall be prepared to present these documents when requested by the security guard.

2. Contractor vehicles utilized in performance of the contract shall be registered with the Installation Provost Marshal for entry into any Army Installation. This includes contractor employees' privately-owned vehicles (POVs) used to travel to and from the job site. Employees will be allowed to register only one vehicle. It shall be the sole responsibility of the contractor to register vehicles with the Provost Marshal.

3. Prior to contract performance, the contractor shall provide the Contracting Officer with a list of company-owned vehicles, employee POVs, and any subcontractor vehicles to be registered. The Contracting Officer will prepare a request for vehicle registration to the Provost Marshal. Upon receipt of the signed request the contractor shall report directly to the Provost Marshal

for vehicle registration. Contractor employees must report in person for registration of their POVs. The following documents will be required to be presented to the Provost Marshal for vehicle registration:

a. Contracting Officer's request for vehicle registration.
b. Valid Vehicle registration
c. Valid Certificate of Insurance
d. Current Safety Inspection
e. Valid driver's license

4. At any time contractor employees (or subcontractor employees) are operating contractor-owned vehicles on an Army Installation, they shall have in their possession a letter signed by a corporate officer authorizing the individual to drive the vehicle.

5. The Contracting Officer and the Provost Marshal office shall be notified of any changes in vehicles within three business days of the change.

6. In the event the Provost Marshal issues extended passes for vehicles, lost passes shall be reported immediately, in writing, to the appropriate Provost Marshal Office, in order to obtain new passes. Notification shall include all circumstances surrounding the loss of the original passes. All vehicle passes issued shall be returned to the Provost Marshal upon completion of the contract, termination of an employee or discontinued use of the registered vehicles.

7. Failure to follow the procedures outlined above may result in delays in entering Army Installations. The Government is not responsible for any adverse impact on the contractor or its operation as a result of delays due to the failure to register vehicles.

S-36.22 NOTICE OF PARTNERING

The Government intends to encourage the foundation of a cohesive partnering arrangement with the contractor and its subcontractors. This partnering arrangement will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance intended to achieve completion within budget, on schedule, and in accordance with contract plans and specifications. This partnering arrangement will be bilateral in membership. To implement this partnering initiative, it is anticipated that within 60-days of Notice to Proceed, the contractor and Government management teams to include on-site and off-site management will attend a 3 day partnering development seminar/team building workshop. Any costs associated with the partnering workshop, excluding salaries, travel, lodging, and food for Government personnel, shall be borne by the contractor. The facilitator for the workshop shall be an objective and neutral third party participant, skilled in team building and group dynamics, who has no vested interest in the decisions reached by the group. Up to 20 Government personnel will attend this workshop. The partnering workshop will be held in Hawaii.

[End of Statement]

S-36.21 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

(a) The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

(c) Schedule of utilities available from the Government without charge: Water and electricity

[End of Statement]

S-36.20 PERFORMANCE OF WORK BY THE CONTRACTOR - DEFINED (NOV 1998)

(a) "Work," means physical work activities, involving any of the trades required to directly place the construction required by the contract. It also includes physical activities that directly support the work, such as: (1) warehousing; (2) maintenance of equipment; (3) procurement and transportation of supplies or construction materials to the site for use by the contractor; (4) procuring, transporting and providing equipment for use by the contractor; (5) logistical activities that directly support the contractor's employees; and (6) similar activities. The meaning of the term does not include: (1) physical work performed by subcontractors; (2) procurement and transportation of supplies or construction materials to the site for use by subcontractors; (3) procuring, transporting and providing equipment for use by subcontractors; logistical activities undertaken by subcontractors for the benefit of contractor or subcontractor employees; (4) superintendence, quality control, clerical or similar activities; or (5) other activities of a similar nature.

Work will be quantified in terms of its monetary cost to the contractor, and will be compared to the total direct costs that the contractor incurs in performing the contract.

(b) "On the site" means the area within the construction limits depicted or described in the contract drawings or specifications. Activities such as transportation, maintenance and logistics that take place outside of the construction limits depicted or described are still "on the site," if in direct support of activities within the construction limits.

(c) "The contractor's own organization" means those individuals who are employed and paid by the contractor, whether full or part time. If a joint venture or partnership, members (and their paid employees) of the joint venture or partners are considered part of "the contractor's own organization." If a corporation, wholly-owned subsidiary elements of the corporation and their paid employees, are considered part of "the contractor's own organization." Any individual who is employed or paid, even on a occasional basis by an entity other than the contractor (such as a subcontractor), or any subcontractor or supplier to the contractor, is not considered part of "the contractor's own organization."

[End of Statement]

S-36.19 PROGRESS CHARTS

If the Government revises the work to be accomplished by issuing a Notice to Proceed with a change to the contract which would affect the order of work or duration of time for completing the work, the progress chart prepared by the Contractor pursuant to the Contract Clause entitled 'SCHEDULE FOR CONSTRUCTION CONTRACTS' shall be revised promptly by the Contractor by adding to, deleting, or rescheduling the affected features to indicate the Contractor's current plans for completing the work as revised. The cost for this revision of the schedule is a part of the cost of the change. Revisions to the progress charts shall be made no later than the next regular progress updating following notice to proceed with the change, whether or not the formal modification to the contract has been issued. If the Contractor fails or refuses to incorporate the changed work in the progress chart, the Contracting Officer may furnish revisions which the

Contractor shall include and use in the progress chart until the modification is settled or until actual dates supersede the estimated data. If the Contractor objects to the changes furnished by the Contracting Officer, it shall submit such objections in writing along with a counterplan within 20 days after the date suggested revisions were furnished by the Contracting Officer. Failure to submit objections and counterplan within the 20 days will be deemed to indicate the Contractor's concurrence in the Contracting Officer's suggested revisions. The schedule into which these revisions have been incorporated shall become the current schedule for continued evaluation of progress and the document which will be used to evaluate impact on the Contractor's work for time extensions.

[End of Statement]

S-36.18 ACCIDENT PREVENTION PLAN (DEC 1998)

Within 15 days after receipt of Notice of Award of the contract, and at least 7 days prior to the preconstruction conference, four copies of the Accident Prevention Program shall be submitted to the Contracting Officer for review and acceptance. The program shall consist of the following forms and documents:

(a) An executed POD Form 248-R Rev (1 Jun 98), Accident Prevention Program, Administrative Plan.

(b) An executed POD Form 184-R Rev (16 Oct 98), Activity Hazard Analysis. (At the Contracting Officer's discretion, the Contractor may submit its Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase.)

(c) A copy of company policy statement of accident prevention and any other guidance statements normally provided new employees.

Contractor shall not commence physical work at the site until the program has been accepted by the Contracting Officer, or his authorized representative. In developing and implementing its Accident Prevention Program, the Contractor is also responsible for reviewing Section 1 of the most current edition (Sep 1996) of US Army Corps of Engineers Safety and Health Requirements Manual, Engineer Manual 385-1-1. [See paragraph entitled, SAFETY STANDARDS, in Section 00800]

[End of Statement]

S-36.17 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (AUG 1999)

Whenever a contract or modification of contract price is negotiated, the Contractor's cost proposals for equipment ownership and operating expenses shall be determined in accordance with the requirements of Special Contract Requirements statement, entitled "EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE," of this solicitation. EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" is available at http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1110-1-8(vol10)/toc.htm for State of Hawaii (Region 10) and at http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1110-1-8(vol12)/toc.htm
for Kwajalein Island, Roi-Namur Island, and Meck Island (Area 12), including Guam, American Samoa, and Johnston Island). [FAR 31.105(d)(2)(i) and EFARS 31.105(d)(2)(i)(b)].

[End of Statement]

S-36.12 PROJECT SIGN

A project sign shall be fabricated and erected at a location designated by the Contracting Officer. The sign shall be constructed as shown on Drawing Nos. 40-21-01 and 40-21-06 copies of which are provided at the end of this section. The sign shall be erected as soon as possible and within 15 days after the date of notice to proceed. Upon completion of the project, the sign shall be removed and disposed of.

[End of Statement]

S-36.11 POSTERS AND NOTICES

Wage Rate, Equal Employment Opportunity, and Nondiscrimination in Employment Posters and Notices will be provided to the Contractor by the Contracting Officer. The Contractor shall mount these posters and notices, together with the wage determination decision, under weatherproof, transparent, protective covering, in one or more conspicuous places, as approved, and readily available to employees.

[End of Statement]

S-36.10 WARRANTY IMPLEMENTATION (MARCH 2000)

(a) The Contractor shall designate a representative within the State of Hawaii to implement the Warranty of Construction clause. The Contractor may designate himself provided he has a permanent office in the State of Hawaii. The Contractor may designate different representatives for separate specialties of work.

(b) The name, address, telephone number of each representative, and nomenclature of warranty item shall be submitted to the Contracting Officer's representative at least 30 days prior to the contract completion date or beneficial occupancy of the work or part thereof. For the purposes of paragraph f of the warranty clause, a reasonable time shall be considered to be as follows:

(1) 21 calendar days from the receipt of a written notification of any failure, defect, or damage of such nature that the work remains functional or habitable or both, as applicable.

(2) 24 hours for failures, defects or damages which render the work nonfunctional or uninhabitable or both, as applicable. Response in this instance starts from receipt of verbal notification from an authorized Government representative. Written confirmation will follow the initial verbal request.

[End of Statement]

S-28.8 PERFORMANCE AND PAYMENT BONDS (OCT 1995)

(Applicable to contracts exceeding $100,000)

Within fourteen (14) calendar days after the date of contract award, the bidder to whom award is made shall furnish the Government with two bonds, each with good and sufficient surety or sureties acceptable to the Government; namely, a Performance Bond (Standard Form 25) and a Payment Bond (Standard Form 25-A).

Any bonds furnished will be furnished by the Contractor to the Government prior to issuance of a Notice to Proceed by the Government. [FAR 28.102-3]

[End of Statement]

S-28.7 REQUIRED INSURANCE (Dec 1993)

(The following is applicable when work is performed on a government installation.)

The minimum insurance requirements, pursuant to Section 00700, Contract Clause, "INSURANCE - - WORK ON A GOVERNMENT INSTALLATION" of this contract, are:

Workers' Compensation and Employer's Liability Insurance - Minimum coverage of $100,000.

Comprehensive General Liability Insurance - Minimum coverage of $500,000 per occurrence.

Automobile Liability Insurance

(1) Bodily Injury: Minimum coverage of $200,000 per person and $500,000 per occurrence.

(2) Property Damage: Minimum coverage of $20,000 per occurrence.

The Contractor shall insert the substance of this clause in subcontracts under this contract that require work on a Government installation. The Certificate Holder for Subcontractors' Certificates of Insurance shall be the U.S. Army Engineer District, Honolulu, Fort Shafter, Hawaii 96858-5440. [FAR 28.306 and 28.307-2]

[End of Statement]

S-23.2 ASBESTOS PROHIBITION & CERTIFICATION (SEP 2000)

a. Materials or products containing more than one percent asbestos shall not be used in this project. The Contracting Officer, at any time prior to acceptance of the work, or during the period designated for warranty of the work, if any, may reject materials and products that contain asbestos in excess of one percent, and direct the removal of such materials and products from the jobsite, at the sole expense of the contractor, and without additional time granted for performance of the work. After completion of this contract, if asbestos (exceeding 1%) is discovered in the products or materials (excluding items permitted by the exception) installed by the contractor, the Government reserves the right to direct the Contractor to perform asbestos abatement and restoration work, as required, at the Contractors' sole cost. Asbestos abatement work (removal and disposal of asbestos-containing materials and products) shall be accomplished in accordance with currently applicable United States Government and State of Hawaii standards for such work.

"Exception: Where suitable asbestos-free (equal to or less than 1% asbestos) substitutes do not exist for a material or product, the contractor may use a material or product containing asbestos in excess of 1%, with the prior written approval of the Contracting Officer. The Contractor shall submit a written request for such substitution, accompanied by a certification from the manufacturer of the material or product that shall set forth, in specific detail, the amount of asbestos present in the material or product. When available, laboratory analysis of the material or product for asbestos content shall be included with the submittal."

b. The Government may conduct asbestos testing on suspected asbestos-containing materials and products excluding items permitted by the "Exception", and such testing will be conducted at the expense of the Government. However, wherever destructive testing is required, or a material or product must be utilized by the Government for testing, the Contractor, shall, at its own expense, repair or replace the material or product, or the item of work that has been disturbed by testing, if the test results confirm presence of asbestos exceeding 1%. In the event test results indicate 1% or less asbestos content or complete absence of asbestos, the Contractor shall restore the test site to its original condition and the cost of restoration work, as approved by the Contracting Officer, shall be borne by the Government.

c. As a minimum, the Contractor shall furnish manufacturer's certification for the items listed below, excluding items permitted by the "Exception", certifying that they are asbestos free or do not contain asbestos in excess of 1%, as applicable. However, when presence of asbestos is suspected in other products and materials used in this project, the Contractor shall be required to provide such certification for those additional items when so directed by the Contracting Officer. Asbestos certification shall be required for the items applicable to this project only.

1. Vinyl sheet/vinyl tile flooring, including accessories and adhesives

2. Insulation materials including facing

3. Gaskets for piping and duct work

4. Acoustical Tiles

5. Firestopping materials

6. Fireproofing materials

7. Special Coating, including factory applied coatings, on sheetmetal roofing and siding

8. Wallboard for all interior and exterior applications including joint compounds

9. Adhesives (other than Item 1) used in the project

10. Tape materials used in the project

11. Roofing and Siding, nonmetallic

12. Felt materials and cushion materials

13. Pre-mixed mortars, grouts, leveling compounds, fillers, and other cementitious materials

14. Caulking and sealing materials

d. All submittals shall be accompanied by a certification from the manufacturer of the material or product that the material or product is asbestos-free; or shall set forth, in specific detail, the amount of asbestos present in the material or product. Documentary evidence of laboratory analysis of the material or product for asbestos content, conducted by an independent testing laboratory accredited for asbestos analysis by either the American Industrial Hygiene Association (AIHA) or the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology (NIST).

e. The Contractor shall implement asbestos awareness and require all subcontractors, vendors, and suppliers to furnish materials and products free of asbestos except where and exception is warranted. The Contractor shall require all subcontractors, vendors, and suppliers to provide manufacturers certifications and data to support the exception. The request for exception shall be provided in writing to the Contracting Officer 30 days prior to commencement of any field work related to that product for which the exception is sought for the project.

f. The Contractor shall monitor all subcontractors, vendors, and suppliers to ensure asbestos containing building materials are not used in the project except those permitted by the Exception.

g. Recording

(1) The Contractor shall annotate on the as-built drawings the location where asbestos containing building materials and products have been used. The annotation shall contain the material and quantity.

(2) Where projects are completed using no asbestos, the Contractor shall prepare and sign a Certification of Asbestos Free Facility. The certification shall contain the project name, contract number, date of certification, and Contractor's name. The certificate shall state that, to the best of Contractor's knowledge, the facility has been completed without the use of asbestos containing building materials and products. The certification shall be signed by the company president or principal or by an individual authorized to sign for the president or principal.

S-23.1 Emergency Planning Community Right to Know Act (EPCRA) Extremely Hazardous Substances (EHS), CERCLA Hazardous Substances, and other OSHA Hazardous Chemicals (May 2000)

This applies to any contractor utilizing EPCRA EHS, CERCLA hazardous substances, and other OSHA hazardous chemicals in performance of any work while on any US Army Garrison, Hawaii (USAG-HI) installations. The EPCRA EHS are defined in EPA document EPA 550-B-98-017, Title III List of List, Consolidated List of Chemicals Subject to the Emergency Planning and Community Right to Know Act and Section 112(r) of the Clean Air Act Amended. Contractors are responsible for knowing which chemicals they may use or transport are contained on the list. For convenience, contractors may review a copy of the EPA document at the Directorate of Public Works (DPW) Environmental Department. To obtain a copy of the list, the document is also available at the U.S. Environmental Protection Agency (EPA) Web address http://www.epa.gov/ceppo/p-gen.htm. For contractors' information, the locations of these chemicals stored on USAG-HI installations are available upon request. To obtain the list of locations, forward request to the following E-mail address: takenakc@schofield-emh1.army.mil. Indicate name, company, contract awarded and description of contract. A data base of locations of chemicals will then be forwarded upon review and approval of request. Contractors working on USAG-HI installations are encouraged to review this database which will provide information where potentially hazardous chemicals are stored.

(1) Reporting. All spills of substances containing EPCRA EHS and CERCLA hazardous substances, and OSHA hazardous chemicals will be immediately reported to the Directorate of Public Works (DPW) Spill Response line at 656-1111 during normal working hours. After normal working hours or weekends/holidays, all spills will be reported to the DPW Work Order Desk at 656-1275. The Contracting Officer must be notified during the first business hour immediately after. All waste developed resulting from EPCRA EHS, CERCLA hazardous substances, and other OSHA hazardous chemicals being utilized will be immediately reported to the DPW Environmental Office, phone: 656-2878 x 1022 (Mr. Akasaki).

(2) All Contractors Utilizing Substances Containing EPCRA EHS, CERCLA hazardous substances, and other OSHA hazardous chemicals will perform the following prior to contract start.

(a) Review the Installation Spill Contingency Plan, the Installation Hazardous Waste Management Plan and the 40-hour Environmental Compliance Officer Course manual available at the DPW Environmental Department or at the Directorate of Contracting. Upon review, the contractor or designated responsible employee shall sign a certification statement that they have reviewed and understand the contents of these documents.

(b) Provide a list of all EPCRA EHS, CERCLA hazardous substances, and other OSHA hazardous chemicals projected to be utilized, the estimated quantities of each and the Material Safety Data Sheets to the DPW Environmental Department and also to building 6040 East Range for material bar-codes.

(c) Provide the name, phone number, and pager number of a company spill response point of contact. The point of contact must be trained in spill response.

(d) Provide a copy of an agreement with a hazardous materials spill response company in the event of a spill.

(e) Provide copies of training certificates on environmental training and spill response training.

(f) Appoint a primary and alternate Environmental Compliance Officer in writing.

(g) Develop a notification procedure in the event of a spill to include phone numbers of response personnel, support agencies, National Response Center, State Hazard Evaluation Emergency Response Office and Civil Defense.

(3) Annual Update. On an annual basis, but not later than 1 February of each year, provide DPW Environmental Department an updated list as referenced in (2)(b) above.

(4) Contractor Caused Spills or Waste Generated of Substances Containing EPCRA EHS, CERCLA Hazardous Substances, and OSHA Hazardous Chemicals.

(a) All spills caused by the contractor will be cleaned up under supervision of the contractor and a qualified hazardous materials spill response company, at no cost to the government, in accordance with all applicable laws and regulations and to the satisfaction of the DPW Environmental Department.

(b) Accomplish all spill notifications as required by the U.S. Environmental Protection Agency and State of Hawaii to the Hazard Evaluation Emergency Response Office, Local Emergency Response Commission and National Response Center.

(c) Pay for disposal cost of all contaminated materials to include but not limited to soil, sorbent materials, disposable equipment and other materials contaminated by the spill. Ensure all disposal is in accordance with all applicable laws and regulations at authorized disposal sites.

S-22 VALIDATION OF COMMERCIAL ANALYTICAL CHEMISTRY LABORATORIES FOR U.S. ARMY ENGINEER CORPS OF ENGINEERS' (USACE) HAZARDOUS, TOXIC & RADIOACTIVE WASTE (HTRW) PROJECTS (MAR 1994)

Laboratories must be validated for project specific parameters and matrices prior to analyzing any samples under contract as part of USACE HTRW Program execution. Laboratories must be revalidated every eighteen month if they are actively supporting USACE projects.

Initial laboratory validations require eight to twelve weeks, depending on the responsiveness of the laboratory. Revalidation usually requires less time.

The list of currently validated laboratories and information on the validation process can be obtained by writing to the contracting office shown on the cover page of this solicitation.

Potential contractors may use laboratories on the list or propose to use laboratories not on the list. Proposed laboratories not on the list must be validated prior to analysis of the samples.

[End of Statement]

S-19 SAFETY STANDARDS

The successful offeror will be required to comply with Chapter 396 of the Hawaii Occupational Safety and Health Act (OSHA) standards and Title 12 Department of Labor and Industrial Relations, Subtitle 8 Division of Occupational Safety and Health, Part 2 General Industry Standards as well as with the Corps of Engineers Manual 385-1-1, Safety and Health Requirements Manual. [Title 29, CFR, Chap 18, Part 1910 (OSHA)]

[End of Statement]

S-19A U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1 (FEB 01)

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions.) EM 385-1-1 and its changes are available at the following web site:

http://www.hq.usace.army.mil/soh/hqusace_soh.htm

The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation.

[End of Statement]

S-18 ASBESTOS --- (OCCUPATIONAL HEALTH AND ENVIRONMENTAL)

(a) THE CONTRACTOR IS WARNED THAT EXPOSURE TO AIRBORNE ASBESTOS HAS BEEN ASSOCIATED WITH FOUR DISEASES: LUNG CANCER, CERTAIN GASTROINTESTINAL CANCERS, PLEURAL OR PERITONEAL MESOTHELIOMA AND ASBESTOSIS. Studies indicate there are significantly increased health dangers to persons exposed to asbestos who smoke and further, to family members and other persons who become indirectly exposed as a result of the exposed worker bringing asbestos-laden work clothing home to be laundered.

(b) The Contractor is advised that friable and/or nonfriable asbestos containing material has been identified in area(s) where contract work is to be performed. Friable asbestos containing material means any material that contains more than 1 percent asbestos by weight that hand pressure can crumble, pulverize or reduce to powder when dry. Nonfriable asbestos containing materials do not release asbestos fiber during routine handling and end-use. However, excessive fiber concentrations may be produced during uncontrolled abrading, sanding, drilling, cutting, machining, removal, demolition or other similar activities.

(c) Care must be taken to avoid releasing, or causing to be released, asbestos fibers into the atmosphere where they may be inhaled or ingested. The Occupational Safety and Health Administration (OSHA) has set standards at 29 CFR 1910.1001, for exposure to airborne concentrations of asbestos, fibers, methods of compliance, medical surveillance, housekeeping procedures and other measures that must be taken when working with or around asbestos containing materials which release airborne asbestos fibers at concentrations in excess of those established 29 CFR 1910.1001. 29 CFR 1910.1001 has been identified as applicable to

construction (29 CFR 1926.55 gases, vapors, fumes, dusts and mists). The Environmental Protection Agency (EPA) has established standards at 40 CFR 61.140-156 for the control of asbestos emissions to the environment and the handling and disposal of asbestos wastes.

(d) When contract work activities are carried out in locations where the potential exists for exposure to airborne asbestos fibers as described in paragraph (b), or where asbestos waste will be generated, the Contractor shall assure that all measures necessary to provide effective protection to persons from exposure to asbestos fibers (and prevention of contamination to property, materials, supplies, equipment and the internal and external environment) are effectively instituted.

(e) As a minimum, the Contractor shall comply with the provisions of 29 CFR 1910.1001 and 1926.55; 49 CFR 72.101, 172.200-204, 172.316, 173.1090; 40 CFR 61.140-156; and any state implementing hazardous waste under the Resources Conservation and Recovery Act (RCRA) requirements and any other applicable federal, state or local requirements.

(f) In addition to the information required in Contract Clause, ACCIDENT PREVENTION, of this contract, the Contractor's Accident Prevention Plan must also fully address the following topics, and at the Contractor's option may include additional information as applicable.

(1) Medical Surveillance: (29 CFR 1910.1001(J)).

(2) Employee training: Prior to beginning work in asbestos containing material area(s) (29 CFR 1910.1001 and 29 CFR 1910.134).

(3) Respiratory protection: (29 CFR 1910.1001 and 29 CFR 1910.134)

(4) Personal protective clothing and equipment: (29 CFR 1910.1001(d)). The use of compressed air to remove asbestos from workers' clothing is prohibited. The Contractor shall specify the type of change room, wash facilities and laundering facilities as applicable.

(5) Airborne asbestos monitoring: 29 CFR 1910.1001(f)). Specify the monitoring and analytical procedures to be used before, during, and after completion of contract work in areas where asbestos containing materials are located. All asbestos monitoring shall be conducted under the guidance of an industrial hygienist certified by the American Board of Industrial Hygiene. Samples shall be analyzed by an American Industrial Hygiene Association (AIHA) accredited laboratory proficient in the analysis of asbestos and asbestos containing materials. Turn around time from end of sampling period to review of results of analyses by Contractor shall be no longer than 72 hours.

(6) Housekeeping: (29 CFR 1910.1001(h)). Dry sweeping of contract work areas contaminated with asbestos containing material is prohibited. The Contractor shall specify methods and materials used to package asbestos containing waste and plan to control any incidental airborne release or spill of asbestos containing material.

(7) Methods of compliance: (29 CFR 1910.1001(c)). Contractor shall include procedures relating to engineering controls, local exhaust ventilation, particular tools to be used and work practices (1910.1001(c)). Specify methods, materials and equipment to be used to prevent asbestos contamination to property, materials, supplies, equipment and the internal and external environment during maintenance, renovation or other contract activities. Local Exhaust ventilation equipment including power operated tools equipped with local exhaust ventilation shall conform with the Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems ANSI Z9.2 latest revised edition. Describe the type of high-efficiency filtered (HEPA) vacuum cleaners that shall be used to vacuum asbestos containing materials. Describe methods and materials to be used to assure all asbestos containing material will be thoroughly wetted by

use of a wetting agent and water before removal and that airborne asbestos dust will be kept to a minimum.

(8) Methods and materials to be used to decontaminate any property, materials, supplies, equipment and the environment if asbestos contamination results. (29 CFR 1910.1001(c)).

(9) Recordkeeping procedures. (29 CFR 1910.1001(i) and 1910.20).

(10) Specific description of packaging, marking and shipping conveyances to be used to transport asbestos containing waste from the generation point to a storage or disposal facility in compliance with Department of Transportation requirements. (49 CFR 172.101, 172.200-204, 176,316, 173.1090).

(11) Emergency procedures that would be taken if an accident of spill of asbestos containing material occurs during the transport of asbestos containing waste. (40 CFR 61.20-25).

(12) Methods and equipment used to off load and bury asbestos containing waste control airborne emissions at the burial site. (40 CFR 61.20-25).

(g) The Contractor shall complete and return to the Contracting Officer within 15 working days after the completion of all airborne asbestos monitoring conducted under this contract, a 'Summarization of Airborne Asbestos Sampling Results' form (ENG Form 4921-R, Jan 86) provided by the Government. NOTE: This completed summarization form is to be used by the US Army Corps of Engineers for statistical information purposes and does not relieve the Contractor from his recordkeeping requirements as described in 29 CFR 1910.1001(i) and 1910.20.

(h) An industrial hygiene asbestos survey was conducted in the contract work area(s) to identify the presence of asbestos containing materials as described in paragraph (b) above. The data collected is contained in the ASBESTOS SURVEY REPORT found at the end of this section.

(i) The industrial hygiene asbestos survey described in paragraph (h) may not have identified all asbestos containing materials in the contract work area(s). When contract work area(s) appear to have asbestos containing material not identified in the ASBESTOS SURVEY REPORT, the Contractor shall conduct an asbestos survey to identify such material(s) in a manner similar to that described in the ASBESTOS SURVEY REPORT.

[End of Statement]

~~S-1a REPORTING OF CONTRACTOR MANPOWER DATA ELEMENTS (FEB 2001)~~

~~(a) Scope. The following sets forth contractual requirements for reporting of contractor labor work year equivalents (also called Contractor Man-year Equivalents (CMEs)) in support of the Army, pursuant to 10 U.S.C. 129a, 10 U.S.C. 2461(g), Section 343 of P.L. 106-65, and 32 CFR 668. Reporting shall be accomplished electronically by direct contractor submission to the secure Army Web Site: https://contractormanpower.us.army.mil. (Note: In order to access this secure site, the Windows browser software must be upgraded to support 128-bit encryption)~~

~~Information on the background, purposes, and significance of this reporting requirement, and the 32 CFR 668 Final Rule as published in the Federal Register, can be found at this Web Site. In addition, a Help Desk function, detailed instructions on what and how to report, FAQs, and a site demonstration are available. The Army's objective is to collect as much significant CME data as possible to allow accurate reporting to Congress and for effective Army planning. The reporting data elements should not be viewed as an "all or nothing" requirement. Even partial reporting, e.g., direct labor hours, appropriation data, place of performance, Army customer, etc., will be helpful.~~

(b) Applicability. This reporting requirement applies to services covered by Federal Supply Class or Service codes for 'Research and Development," and "Other Services and Construction." Report submissions shall not contain classified information. (Also see "Exemptions" at (d) below.)

For indefinite-delivery indefinite-quantity contracts, this reporting requirement will only apply to task orders exceeding $25,000.

(c) Requirements. The contractor is required to report the following contractor manpower information, associated with performance of this contract action in support of Army requirements, for all covered contracts, to the Office, Assistant Secretary of the Army (Manpower and Reserve Affairs) (ASA(M&RA)), using the secure Army data collection web-site at https://contractormanpower.us.army.mil. (Other information requirements associated with the manpower data collection (contract and task or delivery order numbers; appropriation data and amounts; total estimated value of contract; federal supply class or service code; major Army organizational element receiving or reviewing work; beginning and ending date for reporting period; place of performance; name, address, and point of contract for contractor; etc.) are specified and explained at the web site.)

(1) Labor Hours. Composite direct labor hours and the value of those hours. Composite indirect labor hours associated with the reported direct hours, and the value of those indirect labor hours plus compensation related costs for direct labor hours ordinarily included in the indirect pools.

(2) Rates. Alternatively, contractors may report two distinct, relevant (annualized) composite or average indirect labor rates in lieu of raw indirect labor hours and the value of those indirect hours. Such rates shall be annualized average estimates for the reporting contractor and need not be developed for each reporting period. Either method chosen should be consistently reported.

(d) Exemption(s). If the contractor is unable to comply with these reporting requirements without creating a whole new cost allocation system or system of records (such as a payroll accounting system), or due to similar insurmountable practical or economic reasons, the contractor may claim an exemption to at least a portion of the reporting requirement by certifying in writing to the contracting officer the clear underlying reason(s) for exemption from the specified report data element(s), and further certifying that they do not otherwise have to provide the exempted information, in any form, to the United States Government. The "self-exemption" will apply to all contract actions involving the contractor and will be reviewed and approved by the Deputy Assistant Secretary of the Army (Procurement), in coordination with the Deputy Assistant Secretary of the Army (Force Management and Resources), whose decision is final in this matter.

(e) Uses and Safeguarding of Information. The information submitted will be treated as contractor proprietary information when associated with a contractor name or contract number.

(f) Subcontract Data. The contractor shall ensure that all reportable subcontract data is timely reported to the data collection web site (citing this contract/order number). At the discretion of the prime contractor, this reporting may be done directly by subcontractors to the data collection site; or by the prime contractor after consolidating and rationalizing all significant data from their subcontractors.

(g) Report schedule. The contractor is required to report the required information to the ASA(M&RA) data collection web site generally contemporaneous with submission of a request for payment (for example, voucher, invoice, or request for progress payment), but not less frequently than quarterly, retroactive to October 1, 1999, or the start of the contract/order, whichever is later. Deviation from this schedule requires approval of the contracting officer.

~~The contractor shall include a statement in their payment request that Contractor Manpower Reporting has been completed by their firm and applicable subcontractors. Government officials will verify prime contractor and subcontractor compliance with the reporting requirement. Compliance with this requirement is an integral part of the performance of this contract and will be reflected in the performance evaluation of this contract.~~

~~(h) Reporting Flexibility. Contractors are encouraged to communicate with the Help Desk identified at the data collection web site to resolve reporting difficulties. The web site reporting pages include a "Remarks" field to accommodate non-standard data entries if needed to facilitate simplified reporting and to minimize reporting burdens arising out of unique circumstances. Changes to facilitate reporting may be authorized by the contracting officer or the Help Desk (under HQDA policy direction and oversight). Help Desk may be contacted as follows:~~

~~Technical Help Desk: (703) 790-5289 or e-mail to: contractormanpowertech@hqda.army.mil~~
~~Functional Help Desk: e-mail to: contractormanpowertech@hqda.army.mil~~
~~[End of Statement]~~

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995) — EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for settlement of proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region X. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS.

"Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.

(2) If equipment costs have been allocated to a contract using predetermined rates , those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate."

(End of Statement)

DB-1 LIMITATION OF PAYMENT FOR DESIGN

If it should be necessary to terminate this contract, for any reason, prior to completion, the Government will pay the contractor a fair and reasonable price for the design services performed and delivered to the Government. However, such payment will not exceed a sum greater than the amount allowable under 10 U.S.C. 4540 regardless of the actual costs the contractor may be able to substantiate.

[End of Statement]

DB-2 ARCHITECTURAL DESIGNS AND DATA - GOVERNMENT RIGHTS (UNLIMITED) MARCH 1979

(Modified for Turnkey). The Government shall have unlimited rights, in all drawings, designs, specifications, notes and other works developed in the performance of this contract, including the right to use same on any other Government design or construction without additional compensation to the Contractor. The Contractor hereby grants to the Government a paid-up license throughout the world to all such works to which he may assert or establish any claim under design patent or copyright laws. The Contractor for a period of three (3) years after completion of the project agrees to furnish the original or copies of all such works on the request of the Contracting Officer. (This clause shall be applicable only to the successful proposer receiving award of a contract under the terms of this Request for Proposals.)

[End of Statement]

DB-3 PAYMENTS TO CONTRACTOR

With regard to progress payments, no payments will be made for designs until final drawings and specifications have been approved and accepted. A maximum of 4% of the awarded Turnkey contract price will be allowed for the design effort in making progress payments. A request for this payment will not be processed until acceptance of the final design.

[End of Statement]

DB-4 RESPONSIBILITY OF THE CONTRACTOR

(a) The Contractor shall be responsible for the professional quality, technical accuracy and the coordination for all designs, drawings and specifications furnished by the contractor under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in his designs, drawings and specifications. In addition, the Contractor shall construct, without additional compensation, in accordance with such corrected or revised designs, drawings and specifications.

(b) Neither the Government's review, approval or acceptance of, nor payment for, any of the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the Contractor shall be and remain liable to the Government in accordance with applicable law of all damages to the Government caused by the Contractor's negligence in connection with designs, drawings and specifications furnished under this contract.

(c) The rights and remedies of the Government provided for under this contract are in addition to any other right and remedies provided by law.

[End of Statement]

DB-5 APPROVALS PRIOR TO CONSTRUCTION

Review and acceptance of the final plans and specifications must be obtained from the contracting officer before start of construction. However, the Army may accept a design submission for site development, and if found satisfactory, allow the contractor to proceed with earthwork and other elements of site development while final plans and specifications for total work is being completed. The responsibility for a totally integrated design in accordance with the contract will remain with the contractor and this interim NOTICE TO PROCEED shall not mitigate that responsibility.

[End of Statement]

DB-6 MANAGEMENT AT JOBSITE

(a) General. The superintendent provided by the Contractor under the Contract Clauses and Special Contract Requirements paragraphs, shall be an individual or individuals fully qualified by training and experience to provide competent and authoritative overall management of the project in all its aspects and at all times during the progress of the work. The name or names of such individuals and the qualifications of each shall be submitted to the Contracting Officer for review prior to commencement of any work at the site. The Contractor's superintendence force shall be satisfactory to the Contracting Officer.

(b) Authority. The superintendent or superintendents shall be vested with full authority to act for the Contractor at the site to provide for smooth and decisive management of the job without the necessity of reporting to the Contractor's "home office' for decisions. He shall be authorized to execute modifications for amounts up to at least $25,000 and to negotiate and accept for the Contractor time extensions granted under the various clauses of the Contract Clauses. The management responsibilities of the superintendent shall include complete supervision over the work of all subcontractors, coordination of all subcontract operations, close adherence to the Network Analysis System or Progress Charts provided under the Special Contract Requirements paragraphs, management of a field office staff to provide support to accomplish contract requirements and implementation and enforcement of the Contractor's Safety Program.

(c) Availability. The superintendent or superintendents shall be available at the sites of work at all times during working hours to direct and manage the project to assure that schedules are being maintained and that the jobsite conditions are in accordance with contract requirements, as well as to receive directives, instructions, or complaints from the Chief, Quality Control or the Contracting Officer so that prompt and satisfactory action is insured.

(d) As-Built Drawings. The Contractor shall maintain marked-up drawings depicting as-build conditions. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by the Government. The maintenance of the working as-built drawings shall be shown in the same general detail utilized in the contract plans and at the same quality drafting standards. Upon completion of the work, marked-up drawings shall be furnished to the Contracting Officer.

(e) Daily Progress Report. The Contractor's supervisory staff shall provide a daily progress report outlining the equipment on-site, including equipment being repaired, manpower, utilization of manpower and equipment for each work activity and work performed on each Jobsite keyed to the index of the Technical Specifications. This report is separate from and in addition to reporting requirements under Quality Control. The report shall be furnished in two copies (one reproducible by standard office copier equipment) at the jobsite to the Government not later than the second working day from the day the work was performed. Negative reports are required for all calendar days during which there is no activity on the project site with an explanation why no work was performed. Administrative work activities shall be included within the report. The report shall include an analysis of weather conditions and effect on work, identification of work performed by each subcontractor, hours of day in which work was performed, request to the Government for interpretations of differing site conditions noted at the jobsite and other comments pertinent to job progress. Extra work directed by the Government shall also be included. The reports shall be typewritten in an acceptable format to the Government.

[End of Statement]

DB-11 DESIGN-BUILD CONTRACT - ORDER OF PRECEDENCE

a) The contract includes the standard contract clauses and schedules current at the time of award. It also entails: (1) the solicitation in its entirety, including all drawings, cuts and illustrations, and any amendments during proposal evaluation and selection, and (2) the successful Offeror’s accepted proposal. The contract constitutes and defines the entire agreement between the Contractor and the Government. No documentation shall be omitted which in any ways bears upon the terms of that agreement

b) In the event of conflict or inconsistency between any of the provisions of the various portions of this contract, precedence shall be given in the following order:

(1.) Betterments: Any portions of the Offeror’s proposal which both meet and exceed the provisions of the solicitation

(2.) The provisions of the solicitation. (See also Contract Clause: SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION.)

(3.) All other provisions of the accepted proposal

(4.) Any design products, including but not limited to plans, specifications, engineering studies and analyses, shop drawings, equipment installation drawings, etc. These are “deliverables” under the contract and are not part of the contract itself. Design products must conform to all provisions of the contract, in the order of precedence herein.

DB-12 PROPOSED BETTERMENTS

(a) The minimum requirements of the contract are identified in the Request for Proposal. All betterments offered in the proposal become a requirement of the awarded contract.

(b) A “Betterment” is defined as any component or system, which exceeds the minimum requirements, stated in the Request for Proposal. This includes all proposed betterments listed in accordance with the “Proposal Submission Requirements” of the Solicitation, and all Government identified betterments.

(c) “Government identified betterments” include the betterments identified on the “List of Accepted Project Betterments” prepared by the Proposal Evaluation Board and made part of the contract by alteration, and all other betterments identified in the accepted Proposal after award.

DB-13 KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS

In connection with the services covered by this contract, any in-house personnel, subcontractors, and outside associates or consultants will be limited to the individuals or firms that were specifically identified and agreed to during negotiations. The contractor shall obtain the Contracting Officer’s written consent before making any substitution for these designated in-house personnel, subcontractors, associates, or consultants.

GENERAL PROJECT DESCRIPTION AND GENERAL DESIGN REQUIREMENTS

1. DESIGN OBJECTIVES.

1.1. General Requirements. The design and technical criteria contained or referenced in this Request For Proposal (RFP) constitute the minimum requirements of the Government for the subject project, hereinafter referred to as "the WBR project". **These criteria may be obtained from those sites or addresses shown in Appendix 27 of this RFP.** The WBR project renovates Quadrangle F, hereinafter referred to as "Quad F". Quad F consists of four buildings: Bldg. 649, Bldg. 650, Bldg. 651, and Bldg. 652. The exterior appearance of the WBR project shall be designed and constructed to be architecturally compatible with the other quadrangles at Schofield.

1.2. Objectives. This solicitation seeks to obtain renovation, alteration, and construction work of Quad F that is complete and adequate for Unaccompanied Enlisted Personnel Housing (UEPH), administrative facilities, an Enlisted Dining Facility and a Soldier Community functions. See Table 1-1 for a building summary. The WBR project also includes site redevelopment of supporting facilities.

1.2.1 Unaccompanied Enlisted Personnel Housing. The UEPH concept is to provide privacy, security, and comfort to the soldier to the extent possible. The minimum number of persons to be accommodated in this project is 300 sleeping rooms at the E2 through E4 grade level.

1.2.2. Administrative Facilities.

1.2.2.1. Battalion Headquarters. Space will be provided for a command section, S-1/PAC, S-2, S-3, S-4, chaplain and assistant chaplain, classroom, and service core. A Battalion Headquarters standard design is included in this solicitation as a reference to adapt the design into an existing building. Designs will be based on the functional relationships of the design standard. Battalion Headquarters will be designed for physically handicapped individuals.

1.2.2.2. Brigade Headquarters. Space will be provided for a command section, S-1, S-2, S-3, S-4, service core and support services including a Troop Aid Station. A Brigade Headquarters standard design is included in this solicitation as a reference to adapt the design into an existing building. Designs will be based on the functional relationships of the design standard. Brigade Headquarters will be designed for physically handicapped individuals.

1.2.2.3. Company Operations Facility. Space will be provided for Administrative functions: private offices, open administration floor area, conference room, classroom, entry, waiting area, janitor's closet, storage, and toilet facilities. Space will be provided for Operations functions: arms vault, communications storage, equipment maintenance, information management systems room, Nuclear, Biological and Chemical (NBC) equipment storage, unit storage, general storage, TA-50 gear storage, and showers. A Company Operations Facility standard design is included in this solicitation as a reference to adapt the design into an existing building. Designs will be based on the functional relationships of the design standard. Company Operations Facility will not be designed for physically handicapped individuals.

1.2.3. Enlisted Personnel Dining Facility (DFAC). The existing dining facility will be renovated and expanded to meet the new requirements. The major functional areas to be provided in the DFAC are dining, dish washing, employee lockers and toilets, food preparation and cooking, garbage and trash disposal, non-provision storage, patron toilets, staff office, pot and pan washing, receiving platform, refrigerated and dry storage, serving, and signature-head count, cashier station(s), and staging area. An Enlisted Dining Facility standard design is included in this solicitation as a reference to adapt the design into an existing building. Designs will be based on the functional relationships of the design standard. The DFAC will be designed for physically handicapped individuals.

1.2.4. Soldier Community Functions (SCB). The SCB provides the soldier with social gathering areas including a kitchen, recreational space and meeting space. Space will be provided for laundry rooms, mail room with mail boxes, and a social activity room. A SCB standard design is included in this solicitation as a reference to adapt the design into an existing building.

Table 1-1 shows the location the functional areas of the 4 Quad F buildings:

TABLE 1-1 QUAD F Building Work

Building Functions	Bldg. 649			Bldg. 650			Bldg. 651			Bldg. 652		
	1st Flr	2nd Flr	3rd Flr	1st Flr	2nd Flr	3rd Flr	1st Flr	2nd Flr	3rd Flr	1st Flr	2nd Flr	3rd Flr
Unaccompanied Enlisted Housing							♦	♦	♦	♦	♦	♦
Brigade Headquarters		♦										
Battalion Headquarters			♦									
Battalion Headquarters Troop Aid Station	♦											
Battalion Headquarters Classrooms						♦						
Company Operations Facility Administrative Areas			♦		♦							
Company Operations Facility Maintenance Area & Arms Vault	♦											
Company Operations Facility Gear Wash Area							♦			♦		
Enlisted Personnel Dining Facility				♦								
Soldier Community Building Laundry Rooms							♦	♦	♦	♦	♦	♦
Soldier Community Building Mail Room & Mail Boxes				♦								
Soldier Community Building Social Activity Area				♦								

1.2.5. Miscellaneous Facilities.

1.2.5.1. Covered Gear Wash/Recreational Area. A new covered gear wash and recreation facility shall be constructed within the quadrangle courtyard. The primary function of the facility is to provide an area for washing and cleaning soldier personal gear (TA-50). This facility will also co-function as an outdoor recreational area for social gatherings. The recreational area shall include built-in barbecue pits, sink, and tables to accommodate one (1) Company sized gathering. A Company Operations Facility standard design is included in this solicitation as a reference to adapt. Designs will be based on the gear wash functional area requirements of the design standard. In addition to the exterior covered gear wash/recreational area, provide a gear wash area on the ground floors of Buildings 651 and 652. The gear wash area is to be used by the soldiers after field training to clean their gear and foot wear before returning to their rooms. Provide well illuminated and ventilated gear wash areas with multiple hose bibs, drains with sedimentation catch basins, and drying racks."

1.2.5.2. Multi-Purpose Playing Court. The existing multipurpose court shall be demolished and reconstructed. The new courts shall consist of basketball and volley ball play areas. Court markings shall meet National Collegiate Athletic Association (NCAA) and United States Volleyball Association (USVBA) standards. Court shall also include pedestrian walkways, lighting and water fountain(s). Typical multi-purpose playing court details are included in this solicitation as reference to adapt.

1.2.5.3. Bicycle Racks. New bicycle racks shall be constructed within the quadrangle courtyard area. The
Each bicycle rack shall consist of a concrete pad and permanently install racks. Racks shall also include a concrete ramps as required to permit safe egress.

1.2.6. Site Redevelopment. In addition to the renovation of the existing Quad F buildings and the construction of the above miscellaneous facilities, this project will include site redevelopment of the quadrangle complex and surrounding facilities. Site redevelopment will include reconstructing or resurfacing existing access drives, parking areas and pedestrian walkway to provide safe pedestrian and vehicle circulation and meet Antiterrorism/Force Protection requirements. Redevelopment scope will also include upgrading storm drainage and utility systems as well as landscaping to support the complex. The site redevelopment will include the following:

1.2.6.1. Civil Design.

1.2.6.1.1 Demolition. Existing pavement, curbs, gutters, pedestrian walkways, storm drainage and utility systems (water, sewer, electrical distribution, communication, etc.) shall be demolished and removed as required to accomplish the site redevelopment scope.

1.2.6.1.2 Antiterrorism/Force Protection (AT/FP). The quadrangle facilities shall be upgraded to be in compliance with AT/FP design and construction standards. Improvements include realigning Foote Avenue from Glennan St. to Meigs Avenue, installing vehicular entrance control barriers, relocating parking areas and trash enclosures and removing landscaping. Foote Avenue realignment work will include removing and reconstructing pavement, curbs, gutter, sidewalks, pavement marking, signage, utilities, and storm drainage and landscaping. (Note that final AT/FP improvement scope is pending results of an ongoing AT/FP Study. The results of the study will be provided to the offerors.)

1.2.6.1.3 Grading and Storm Drainage. The existing quadrangle storm drainage systems (drain lines, curb inlets, manholes, etc.) shall be removed and replaced (unless otherwise indicated or approved) with upgrade systems to meet current design and construction standards.

1.2.6.1.4 Water and Sewer System. The existing water and sewer systems servicing the existing quadrangle facilities shall be removed and replaced (unless other wise indicated or approved) with upgrade systems to support renovated and new facility service requirements and to meet current design and construction standards.

1.2.6.1.5 For Civil Design requirements, see Subsection 2, General Design - Civil

1.2.6.2 Mechanical Design - Site Redevelopement. The existing underground chilled water lines within the quandrangle complex shall be removed and replaced with upgraded systems to support the renovated and new facilities and meet current design and construction standards. Also, underground chilled water lines that feed Quad E shall be removed and replaced with upgraded systems up to Lewis Street. For exterior mechanical design requirements, see Subsection 5, General Design - Mechanical.

1.2.6.3 Electrical Design - Site Redevelopment. The existing exterior systems (electrical power, lighting, telecommunication, cable tv, etc.) servicing the existing quadrangle facilities shall be removed and replaced (unless **otherwise** indicated or approved) with upgrade systems to support renovated and new facility service requirements and to meet current design and construction standards. For exterior electrical design and construction requirements, see Subsection 7, General Design - Electrical.

1.2.6.4 Landscape Design - Site Redevelopment.

1.2.6.4.1 Design Theme. The landscaping design theme shall incorporate preserved trees and as well as use of native plants, emphasis of building entry points and sense of community. Siting of new facilities shall provide adequate space for trees such that the trees continue to be a valuable asset to the housing community.

1.2.6.4.2 Removal and Preservation of Existing Trees. Scope will include removal of designated trees within the Quad F and surrounding areas. Saved trees shall be protected during demolition and construction activities. Existing trees identified for saving in the Tree Removal and Preservation Plan shall be an integral feature of the site plan. Project design and construction practices shall avoid altogether or minimize construction impacts on saved trees to ensure their long term survival, health, and structural stability.

1.2.6.4.3 Use of Recycled Materials. The approach and plan shall design shall include the use of recycle-content materials, recycling of plant material (tee stumps, and brush) and water conservation.

1.2.6.4.4 For landscape design requirements, see Subsection 9, General Design - Landscape.

1.3. Special Requirements.

1.3.1. Historical Preservation.

1.3.2. Comprehensive Interior Design (CID). The Comprehensive Interior Design is composed of two types of interior design requirements. The first is the building-related interior finishes of walls, ceilings, floor coverings, built-in casework, etc. This is defined as the BID or Building Interior Design. This is the responsibility of the Offeror. The second requirement is the design coordination of interior furnishings and equipment related to the building-related interior finishes. This second requirement is hereinafter referred to as “FID”. CID services will be provided by the Offeror.

1.3.2.1. Completion of a FID involves the selection and sampling of the furnishings components of the interior environment in addition to the building-related interior finishes. This may include furniture systems, freestanding furniture, artwork, and accessories. The FID package will include furniture placement plans, information on all freestanding furnishings and accessories, furniture cost estimates, and order daa sheets. The procurement and placement of the FID products and materials are the responsibility of the Government. The Comprehensive Interior Design requirements and format information is found in the Appendix.

1.3.2.2. In addition to providing a CID package for the dining facility (DFAC). A list of category C food service equipment shall be provided. Class C Equipment is movable in nature and not affixed or built into a DFAC as an integral part of the facility. Because this equipment is the responsibility of the Government, the Offeror must provide the Class C equipment list, description, and cost to ensure the equipment is requisitioned and delivered on site prior to the building occupancy. A 501-800 Enlisted Personnel Dining Facility standard design is referenced in this solicitation. It includes a typical category C food service equipment list.

1.3.2.3. Comprehensive Interior Design (CID) is required for all of the buildings.

1.3.3. Antiterrorism/Force Protection (AT/FP) and Seismic Evaluation and Rehabilitation. Design of this project shall incorporate minimum AT/FP construction standards and required seismic rehabilitation techniques to strengthen the Quad F buildings. See Subsection 4, GENERAL DESIGN - STRUCTURAL, for information on on-going assessments and studies of AT/FP and seismic requirements, and instructions on incorporating retrofits and rehabilitation measures in the price proposal. See also Subsection 2, CIVIL DESIGN, for site upgrades required for AT/FP.

1.4. Design Freedom. Requirements stated in this RFP express the minimum acceptable standards or features which the Government will accept in any proposal submitted. Design and maintainability/quality parts of proposals containing standards or features that exceed (in terms of innovation, creativity or cost-savings) the minimum acceptable standards contained herein shall be considered more advantageous to the Government than design and maintainability/quality parts of proposals that contain standards or features that do not, and may earn the offer a higher quality score for design and maintainability/quality (up to the maximum quality score allowable for those parts of the proposal) than an offer containing merely the minimum required standards or features. Deviations from space and adjacency requirements will not generally be favorably evaluated by the Government unless the change results in improvement to the facilities.

1.5. Design Quality. The objectives are to obtain renovated structures and complementary site development within funds available and to optimize livability and functionality. Design quality is achieved through the optimization of interior planning, integration of the Quad F structures to the site and its natural resources such as existing trees, solar orientation, and balancing architectural attractiveness, sustainable design features, function, and design for low-cost maintenance and operation of the buildings.

1.6. Installation Master Plan. The installation master plan provides comprehensive documentation of the existing conditions of natural, man-made and human resources. It also guides the future land-use development. The master plan should be consulted as it is the mechanism for ensuring that individual projects are sited to meet overall installation goals and objectives for land use development. This can be viewed at Rm. 319C, Bldg. 230, Engineering Services Division, Ft Shafter, Oahu, Hawaii.

1.7. Installation Exterior Architectural Plan (IEAP). Design of this project shall incorporate the design guidance and criteria contained in the IEAP, if no specific guidance/requirements are discussed in the RFP. This can be viewed at Rm. 319C, Bldg. 230, Engineering Services Division, Ft Shafter, Oahu, Hawaii.

1.8. Sustainable Design Features. Public Law 102-486, Executive Order 13123, and Federal Regulations 10 CFR 435, require Federal buildings to be designed and constructed to reduce energy consumption in a life-cycle, cost-effective manner using renewable energy sources when economical. Products designed to conserve energy and resources by controlling the amounts of consumed energy or by operating at increased efficiencies should be considered. Minimum requirements for this project are energy conservation fixtures, window glazing, solar panels or heat pump water heater, time switches, and water flow-limiting plumbing fixtures.

2. CIVIL DESIGN - SITE REDEVELOPMENT.

2.1 Scope. The civil design site redevelopment scope consists of, but not limited to, demolition and clearing; site layout of the covered gear wash/recreation facility, multi-purpose playing court, bicycle racks, trash enclosure, and realigned Foote Avenue. (Site and layout requirements include meeting current Antiterrorism/Force Protection requirements.) In addition, the scope also includes reconstructing and upgrading access drives, parking, and pedestrian walks, storm drainage, water and sewer systems to support renovated quadrangle facilities and meeting current design and construction standards.

2.2 Reference Requirements and Standards.

2.2.1. Army/Military Construction Criteria. Unless otherwise noted, the following criteria is available via the internet at;

http://www.hnd.usace.army.mil/techinfo/index.htm

2.2.1.1. U.S. Army Corps of Engineers Technical Instructions, TI 800-01, Design Criteria, 20 July 1998.

2.2.1.2. U.S. Army Corps of Engineers Technical Instructions, TI 804-11, Design for Non-Organizational or Privately Owned Vehicle (POV), Site Circulation and Parking, November 1998.

2.2.1.3. U.S. Army Corps of Engineers Technical Instructions, TI 814-10, Wastewater Collection, 3 August 1998

2.2.1.4. Army Technical Manual, TM 5-813-5, Water Supply, Water Distribution, November 1996 (Attached in RFP)

2.2.1.5. Military Handbook, MIL-HDBK 1008C Fire Protection for Facilities Engineering, Design, and Construction, dated 10 June 1997, may be obtained at the Corps of Engineers Huntsville Engineering and Support Center web site under “Techinfo”. The web site address is http://www.hnd.usace.army.mil/.

2.2.1.6 Interim Department of Defense Antiterrorism/Force Protection Construction Standards, (For Official Use Only, not available for viewing or download)

2.2.2. City and County of Honolulu Design Standards. The following references are available for purchase from the City and County of Honolulu Municipal Book Store, 558 South King Street, City Hall Annex, Honolulu, HI 96813, Phone: (808) 523-4780. Information on how to purchase and order publications is available via the internet at;

http://www.co.honolulu.hi.us/pur/booklist.htm

2.2.2.1. Rules Relating to Storm Drainage Standards, Department of Planning and Permitting, City & County of Honolulu, January 2000.

2.2.2.2. The Department of Public Works, Standard Specifications for Public Works Construction, City and County of Honolulu, Sept. 1986.

2.2.2.3. The Department of Public Works, Standard Details for Public Works Construction, City and County of Honolulu, Sept 1984.

2.2.3. U.S. Department of Transportation, Federal Highways Administration. The following document shall be used for road and street design: The Manual On Uniform Traffic Control Devices For Streets and Highways. It is available from the Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402.

2.2.4. Americans with Disabilities Act Accessibility Guidelines (ADAAG). Available from U.S. Architectural and Transportation Barriers Compliance Board, Suite 1000, 1331 F Street, N.W., Washington, D.C. 20004-1111 (202) 272-5434.

2.2.5. American Water Works Association, Inc. (AWWA). Specifications are available from AWWA, 6666 Quincy Ave., Denver, CO 80235; voice: 800-926-7337; fax: 303-795-1989: http://www.awwa.org/. AWWA standards called for the standards of the Board of Water Supply, City and County of Honolulu, the following apply: AWWA C907 PolyVinyl Chloride (PVC) Pressure Fittings for Water - 4 Inch Through 8 Inch (100 mm Through 200 mm).

2.2.6. Draft Report Prepared by Belt Collins Hawaii, Ltd., FY96 OMA Family Housing Master Plan and Infrastructure Study, Army Storm Drainage Infrastructure Study Vol. I and II, For Schofield Barracks, March 2001. Copy is available for review at Honolulu District, Bldg. 230, Technical Review Section, Rm. 225.

2.3 Demolition.

2.3.1. Designated demolition limits are indicated on the attached RFP drawings entitled DEMOLITION PLAN-1, -2 and -3.

2.3.2. Existing utilities within the project limits shall be adjusted, relocated or modified as required to remain functional. The Contractor shall coordinate all utility adjustment work with the appropriate utility agencies/departments. The area within the project limits, which does not involve new construction, shall be graded smooth to drain, and planted with grass. All existing walks, parking and streets, drainage and utility systems at the interface with the demolition shall be properly coordinated and new construction provided for the continued functionality, operation and maintenance of adjoining and remaining facilities and systems. All existing utility structure and related appurtenances, which will not be utilized in the project shall be removed and disposed of. Abandonment in-place shall not be permitted unless removal of underground utilities requires excavation within the tree protection zone of the existing trees to be saved. Unless otherwise noted, demolition work shall include the removal and disposal of:

2.3.2.1 Existing Multipurpose Playing Court and trash enclosure and appurtenances.

2.3.2.2 Walks, paved aprons, driveways, parking areas and streets to include curbs and gutters; drainage structures, pipes and culverts.

2.3.2.3 Water, sewer, electrical, telephone, and CATV utilities to include poles, wire, anchors, and underground pipes, conduits, wires, and other appurtenances.

2.3.2.4 Trees not identified for saving or transplanting. For tree removal and preservation requirements, see Subsection 9, General Design - Landscape. For location of trees designated for removal and preservation, see RFP drawings.

2.3.2.5 Shrubs.

2.3.2.6 Landscaping appurtenances to include any irrigation systems.

2.3.3 Disposal of debris and waste material shall be outside the limits of Government property, and shall be the contractor's responsibility. The contractor may at his option dispose of trees and shrubs by chipping the green waste and applying the material as a mulch layer 100 to 150 mm (4 to 6 in.) thick over bare ground surfaces of training grounds at Schofield Barracks to control soil erosion. The location of this material disposal site will be determined by the Director of Public Works, Schofield Barracks.

2.3.4 Construction and Demolition (C&D) Waste. The Offeror is required to submit for government approval a detailed C&D plan after the award of the contract. The purpose of the plan is to minimize the generation of C&D waste, and ensure that the maximum amount of C&D waste (including materials

generated during the clearing of the site, interior demolition of existing structures, and new construction activities) is salvaged for resale or reuse, returned, or is recycled. This plan does not include hazardous waste (any waste substance, which is ignitable, corrosive, reactive, or toxic that, if improperly handled, poses a substantial threat to human health and/or environment).

2.4 Site Layout.

2.4.1. General. The design after award drawings shall indicate the location of the covered gear wash/recreation facility, multi-purpose playing court, bicycle racks, trash enclosure, realigned Foote Avenue access drives, parking, pedestrian walks, and trash enclosure, bike rack, storm drainage, water and sewer systems. Additional items of consideration in siting the facilities will be; antiterrorism/force protection, aesthetics, environmental requirements, safety, and convenience for vehicles and pedestrians.

2.4.2 Covered Soldier Gear Wash/Recreational Facility.

2.4.2.1 Location and Orientation. The approximate location of the gear wash/recreation facility is indicated on the attached RFP drawing entitled, SITE REDEVELOPMENT REQUIREMENTS-1, Sheet C-1. The designer shall coordinate with the government to determine the exact size, location and orientation after award.

2.4.2.2 Size. The approximate size of the facility indicated on the RFP drawing is intended for budgeting **purpose** only. Designer shall coordinate with the government after award to determine the overall facility size.

2.4.2.3 Utilities. Water, sewer, and electrical service shall be provided.

2.4.2.4 Gas Trap. A gas trap shall be provided to prevent sewer gases from migrating back into the trench drainage system. The gas trap shall include a settling basin to capture, separate and remove soil and debris prior to discharge into the sanitary sewer system. For typical gas trap detail, see Attachment, Typical Gas Trap Detail. (Note that detail is provided for informational purposed only. Contractor is responsible for verifying accuracy of dimensions.)

2.4.3 Multi-Purpose Playing Court.

2.4.3.1 Location and Orientation. The approximate location of the multipurpose court is indicated on the attached RFP drawing entitled, SITE REDEVELOPMENT REQUIREMENTS-1, Sheet C-1. The designer shall coordinate with the government to determine exact location and orientation preferred after award.

2.4.3.2 Size. Ground space shall consist of a minimum area of (approximately 1480 sm (15.960 SF) with overall dimensions of 42.6 m (140 ft) and an overall width by of 34.75 m (114 ft). Typical multi-purpose playing court details are included in the RFP Drawings as a reference to adapt.

2.4.3.3 Pavement. Surface shall be bituminous material with concrete curbing along edge with a protective color coating. Typical pavement section shall consist of 100% compacted subgrade, 100% compacted 150 mm (6-inch) base course, 51mm AC surface course with protective color coating (at manufacturer's recommended rate) and 150mm x 300mm reinforced concrete curbing. For additional pavement requirements, see paragraph entitled, "Soils, Pavements and Earthwork ". Typical Multipurpose Court and Striping Details (sheet C-4) are provided in RFP drawings for Contractor to adapt for site-specific requirements.

2.4.3.4 Water Fountain. Multipurpose Courts will include one (1) water fountain (two (2) desirable). Fountain design shall blend in with historic theme of quadrangle facilities. Fountain location shall consider sports safety. Contractor shall coordinate exact location with the Government.

2.4.3.4 Utilities. Water and electrical service shall be provided.

2.4.4 Bicycle Rack.

2.4.4.1 Location and Orientation. The approximate location of the bicycle racks are indicated on the attached RFP drawing entitled, SITE REDEVELOPMENT REQUIREMENTS-1, Sheet C-1. The designer shall coordinate with the government to determine exact location and orientation preferred after award.

2.4.4.2 Size. Ground space for each rack shall be sufficient to accommodate a minimum of 20 bicycles.

2.4.4.3 Utilities. Lighting shall be provided for security and safety requirements.

2.4.5 Trash Enclosure.

2.4.5.1 Location and Orientation. The existing trash enclosure shall be demolished, relocated and replaced with an aesthetically pleasing enclosure**, which will be compatible with the historical theme of the quadrangle.** The enclosure shall be accessible by wheeled trash container **with built-in trash compactor.** Trash **enclosure shall include an aesthetically pleasing** hinged, securable **gate**. The approximate location of the trash enclosure is indicated on the attached RFP drawing entitled, SITE REDEVELOPMENT REQUIREMENTS-1, Sheet C-1. The designer shall coordinate with the government to determine exact location and orientation preferred after award. The location shall meet AT/FP stand off requirements. For AT/FP requirements, see paragraph below entitled, "Antiterrorism/Force Protection (AT/FP) Civil Design Requirements". Location shall also consider odor and prevailing wind direction.

2.4.5.2. Size. Overall dimensions of pad and enclosure shall match the existing. Approach drives to trash enclosure shall be concrete and should have sufficient length to accommodate the largest trash **pickup** vehicle without obstructing the adjacent driveway. The enclosure access driveway width shall be equal to the width of the concrete pad**. Trash enclosure shall include reinforced concrete curbing along the interior face of the enclosure walls. The curbing shall be designed to protect the enclosure wall from accidental impacts from the trash container. Trash enclosure pad and curbing shall be sloped to drain.**

2.4.5.3. Utilities. **Provide electrical power and outlet for trash compactor and security lighting. Power and connection requirements shall be coordinated with the trash collection contractor**.

2.4.6 Antiterrorism/Force Protection (AT/FP) Requirements.

2.4.6.1. General. The site layout of existing and new quadrangle facilities shall be designed to meet Interim DOD AT/FP design and construction standards. (Note: For AT/FP Structural Requirements, see Subsection 4, General Design-Structural.)

2.4.6.2. Project Specific Requirements. The project specific AT/FP design and construction requirements are currently being assessed by an independent Government study. The results of the study will be provided to the Offerors as an amendment to the RFP. The following preliminary project specific requirements are pending the final results of the study.

2.4.6.2.1. Parking and Roadways. Locate parking lots at least 10 m (30 ft) from troop billeting and primary gathering structures. The standoff distance is measured from the nearest edge of pavement. Portions of buildings with lesser occupancies may be located within the standoff distance. (For definition of occupancies, see Interim Department of Defense (DOD) Antiterrorism Force Protection Minimum Construction.)

2.4.6.2.2. Relocated existing trash enclosure at least 25 m (82 ft) from troop billeting (this includes Unaccompanied Enlisted, and primary gathering structures (this includes Brigade HQ, Battalion HQ, Soldier Community, Company Operations, Dining Facility).

2.4.6.2.3. **Provide a securable swing gate at each driveway access entrance and exit to provide a means to control vehicle access into the quadrangle courtyard area**. **The swing gate shall be aesthetically pleasing and compatible with the historical theme of the quadrangle.**

2.4.6.2.4 Provide signage to clearly define vehicle drive-up or drop off areas within the quadrangle to control type of traffic authorized within the quadrangle. (E.g. DO NOT LEAVE VEHICLES UNATTENDED, NO TRUCKS ALLOWED WITHOUT AUTHORIZATION, etc.)

2.4.6.2.5. Realign Foote Avenue shall be realigned from the intersection of Glennan Street to Meigs Avenue. The roadway shall be realigned to provide no less than 4.6-m (15-ft) setback from Quad F, E, D and C buildings to the nearest roadway edge (or traffic face of curb). For approximate limits and location of Foote Avenue realignment work, see attached RFP Drawing Sheet C-1.

2.4.6.2.6 Provide Visual Clear Zone around all Buildings. Avoid conditions within 9.15 m (30 ft) of troop billeting and primary gathering structures that permit concealment of aggressors or that would obscure the view of objects or packages 150 mm (6-inch) in height from view of security personnel. Utility pads for air handlers, transformers, etc., can be placed within the standoff distance if they do not provide access by unauthorized personnel by entering the structure or placing an object within it. This would require a locking enclosure with a roof or similar cover. Landscaping can be placed within the standoff distance only if the vegetation does not obscure an object 150 mm (6-inch) high from the view of the building occupants or those in the immediate surrounding area. For additional landscaping design AT/FP requirements, see Subsection 9, Landscape Design.

2.4.6.2.7 Court Yard Driveway. Courtyard driveway shall be realigned to provide a no less than 9.15m (30 ft) set back from existing quadrangle buildings. Existing pavement structure including curbing shall be replaced. The space between the closest pavement edge and quadrangle buildings shall landscaped.

2.4.7. Circulation, Roads and Parking.

2.4.7.1 General. The separation of vehicular and pedestrian traffic design shall be in accordance with TI 5-804-11, Design for Non-Organizational or Privately Owned Vehicle (POV), Site Circulation and Parking. The vehicular and pedestrian circulation system shall promote safe, efficient movement of vehicles and pedestrians within the quadrangle, adjacent parking lots and adjacent roadways. It should maintain the maximum separation of vehicles and pedestrians. Safe circulation systems shall have a clear hierarchy of movement, lead to a clear destination and do not interrupt other functions. In addition, The following criteria shall be considered for designing streets and drives for vehicles and pedestrians.

2.4.7.2 Pedestrian circulation. Pedestrian circulation should be safe and relate to the open area defined by the four quadrangle buildings, parking and community facilities. Pedestrian circulation should be based on pedestrian desired lines of walking between facilities. Desired lines should be weighted to predict the most traveled routes.

2.4.7.2.1 Quadrangle Pedestrian Walkways. Walkways shall be provided for the quadrangle complex. Walks, expect for building front entry, shall be a minimum of 1,830 mm (6 ft) wide exclusive of curb width, and made of non-reinforced concrete, minimum thickness of 100-mm (4 inches), with welded wire mesh fabric (0.05 percent steel in both directions). Front entry sidewalks shall be 3 m (10 ft) wide. Where walks are adjacent to the curb, the curb width is not to be included as sidewalk. Concrete walks shall be constructed in accordance to UFGS Section 02770a, CONCRETE SIDEWALKS AND CURBS AND GUTTERS, dated March 1998.

2.4.7.2.2. Provisions for Handicapped. Ramps and parking spaces for the handicapped shall be provided in accordance with the latest edition of the Uniform Federal Accessibility Standards (UFAS). Handicap access is required at the Dining Facility. Ramps for handicapped individuals shall also be provided at all intersections and wherever an accessible route crosses a curb. A separate handicapped ramp is required for each crosswalk. Sidewalks shall be widened when necessary to meet ramp slope criteria. Ramps for handicapped individuals shall follow City and County of Honolulu, Standard Detail R-25, dated

September 1992 or later. Walks around the ramps shall be continuous, level and extend at least 1.22 m (4 ft) beyond the ramp unless otherwise approved in writing.

2.4.7.3. Roads and Parking

2.4.7.3.1 Realign Foote Avenue. Foote Avenue modifications includes reconfiguring the roadway section from a two-lane one-way operation to a one-lane one-way operation, upgrading drainage system, relocating street lighting and providing new sidewalks, traffic signs, pavement marking and landscaping. The following Table 2-1, lists the typical required minimum dimensions:

TABLE 2-1 - REALIGNED FOOTE AVE. MINIMUM STREET DIMENSIONS*

Travelway Width (Excluding Gutter)	3.65 m	12 ft
Minimum Curb Radius at Street Intersections	12.2 m	40 ft
Gutters Width	.610 m	2 ft
Curb Height	0.150 m	0.5 ft
Sidewalk (not including curb width)	1.2 m (1.5 m desirable) See Typical Section*	4 ft (5ft desirable) See Typical Section*
Landscaping Strip (North side /South Side)	See Typical Section*	See Typical Section*

* For typical road section, see Attachment, Foote Avenue Typical Road Section.

2.4.7.3.2 Quadrangle access driveways and Courtyard Drive.

2.4.7.3.2.1 The access drives curbing and pavement structure shall be removed and reconstructed**. The dimensions, alignment, turning radius shall be reconfigured as required to provide accessibility for the largest vehicle., In addition, the access drives off of Foote Avenue shall be extended as required to maintain access to the realigned Foote Avenue.**

2.4.7.3.2.2 Courtyard driveway area shall be reconfigured to meet AT/FP stand off requirements. See paragraph above.

2.4.7.3.3. Privately Owned Vehicle (POV) Parking. POV spaces shall be a minimum of 2.7 m by 5.5m (9 ft by 18 ft). Parking aisles shall be minimum 7.3 m (24 ft.). Island widths shall be minimum 3 m (9 ft). Parking stall fillets shall be minimum 1 m (3 ft). For all other parking, the design vehicle that is used to design the space shall be described. Where handicapped access is required, parking space width/length and accessible route clearances shall be provided as required to meet current Uniform Federal Accessibility Standards and Americans with Disabilities Act Accessibility Guidelines. The following discusses the project specific parking requirements:

2.4.7.3.3.1. Quadrangle “Interior Area” POV parking will not be permitted within the quadrangle interior areas.

2.4.7.3.3.2. Reconstruct existing POV parking area adjacent to Bldg. 651 and Glennan Street. Approximate limits are indicated on the attached RFP drawings. The existing asphalt concrete pavement, base course, and subbase course shall be removed, replaced with a new a.c. pavement

structure and striped to provide at least 35 angle parking stalls. Parking spaces shall be marked reserved for military staff, visitor and handicap accessible POV parking. After award, Contractor shall coordinate with the Government for exact number of stalls and labeling requirements. For pavement design requirements, see paragraph 2.6, Soils, Pavements and Earthwork.

2.4.7.3.3.3 Reconstruct the existing POV parking area across Bldg. 650 and along Foote Avenue. Approximate limits and conceptual layout are shown on attached RFP drawings. (Note that layout is for information purposes only and may be used to develop the design after award.) In addition, the reconstruction scope shall include the following minimum requirements.

2.4.7.3.3.3.1 Prior to restriping stalls and aisles for 90-degree parking, provide slurry sand coating on existing asphalt surfaces within scope.

2.4.7.3.3.3.2. Provide striped parking islands. In leiu of striped islands, concrete curbed islands with landscaping and automatic control irrigation is preferred.

2.4.7.3.3.3.3. Maintain smooth and safe traffic circulation between adjacent parking areas.

2.4.7.3.3.3.4. Provide a minimum of two (2) entrances off of Foote Avenue and one (1) off of Glennan Street.

2.4.7.3.3.3.5. Total number of POV parking provided shall be no less than 75 percent of the existing total parking stalls.

2.4.7.3.3.3.6. Provide 3 m (10 FT) wide pedestrian walkway and curbing along south edge of parking area. Provide drainage improvements as required to maintain existing drainage patterns. The pedestrian walkway shall include a landscape strip. See subsection General Design - Landscape, for additional requirements.

2.4.7.3.3.3.7 . Landscaping. Provide 7.6 m (20 feet) minimum wide landscaped buffer area along Glennan St. and 10 m (30 feet) minimum wide landscape buffer area along Foote Avenue. Provide landscape screen along for both buffer areas. For additional landscape design requirements, see subsection, General Design - Landscape.

2.4.7.4. Street Signs: Street name signs and traffic control signs shall be provided where appropriate and shall conform to requirements of U.S. Department of Transportation, Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways. Non-traffic signs as well as building signage shall conform to the requirements of the installation. Signs shall be made of aluminum. All sign support posts shall be breakaway type. Height of sign above finished grade shall be 2.1 m (7 feet).

2.4.7.5. Traffic Control Devices and Pavement Markings: Traffic control devices and pavement markings shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, unless otherwise specified herein or approved.

2.4.7.5.1 Centerline stripes are not required for parking lot aisles and Quad F interior driveways, unless otherwise specified. Stop or approved bar stripes shall be provided at intersections at stop conditions.

2.4.7.5.2 New or reconstructed roadways shall have double yellow thermoplastic centerline with prismatic reflectors.

2.4.7.5.3 Roadway edge lines where required or designated shall have white thermoplastic lines with prismatic reflectors.

2.4.7.5.4 Parking lot markings shall be painted with white 4-inch wide stripes.

2.4.7.5.5. Crosswalk and stop line markings shall be white thermoplastic striping. For typical detail, see Attachment, CROSSWALK & STOP DETAIL.

2.4.7.5.6 Pavement arrows on roads and parking lots shall be white thermoplastic striping.

2.4.8. Fencing. A temporary security fence shall be provided around the Contractor's operations and storage yard.

2.5. Soils, Pavements and Earthwork.

2.5.1. Soils Investigation Letter Report (Geotechnical Letter Report). Preliminary Soils Investigation Letter Report dated 24 January 2001 for Quad F is furnished in attachment entitled Preliminary Soils Investigation Letter. Based upon the data provided in the RFP and Preliminary Soils Investigation Letter Report, a comprehensive Final Soils Investigation Report shall be furnished by the Offeror to whom this contract is awarded. The Final Soils Investigation Report shall be prepared by a professional engineer registered in the State of Hawaii with more than 10 years of experience in soil mechanics and geotechnical engineering. The Final Soils Investigation Report shall certify to the adequacy of the soil and foundation aspects of the design, including, but not limited to, special foundation types, earthwork construction, surface and subsurface drainage, erosion and siltation prevention during and after construction, and settlement or heave. After Government review of the Final Soils Investigation Report, additional soil borings, testing, and investigation, if required, shall be furnished by the Offeror with the final design documents at no additional cost to the Government.

NOTE TO OFFEROR: The soils investigation report furnished by the Government is a Preliminary Letter Report intended for basic information only. The approximate subsurface soil conditions may not represent conditions at all locations. The flexible pavement sections shall be as required for actual traffic and soil conditions, but in no case shall they be lighter (thinner) than that indicated below and in the Preliminary Soils Investigation Letter Report. Should new traffic parameters or actual soil conditions require a heavier pavement structure, a thicker pavement section shall be furnished by the Offeror.

2.5.2. Minimum Pavement Structures:

Parking Lots:	50 mm (2") Asphaltic Concrete, State DOT IV Mix, 150 mm (6") Base Course, 125 mm (5") Subbase Course

2.5.3. Soil Compaction.

2.5.3.1. Soil compaction shall be per local standards specified for use in this contract and as amended herein. Compact each layer to not less than the percentage of maximum density specified in Table 2-2, determined in accordance with ASTM D 1557 Method D:

TABLE 2-2 - SOIL COMPACTION

Subgrade Preparation, Fills, Embankments, and Backfills	Compaction Requirements (Percentage of Maximum Density)	
Structures & Building Slabs	Cohesive Material 90	Cohesionless Materials 95
Streets, Paved Areas, Bike Paths	90	95
Sidewalks and Grassed Areas	85	90

2.5.3.2. The compaction requirements shall be verified or modifications shall be recommended by the soils engineer in the Final Soils Report wherever engineering, soils, or climatic factors indicate the necessity to do so. Any modification to the stated compaction requirements shall require the approval of the Contracting Officer.

2.5.3.3. Soil Classification.

2.5.3.3.1. Cohesionless materials include materials classified in ASTM D 2487 as GW, GP, SW and SP. Cohesive materials include materials classified as GC, SC, ML, CL, and MH. Materials classified as GM and SM shall be identified as cohesionless only when the fines are nonplastic.

2.5.3.3.2. Satisfactory materials for filling and backfilling under all structures and general earthwork shall comprise any excavated on-site materials or imported materials classified in accordance with ASTM D 2487 as GW, GM, GC, GP, SW, SP, SM, SC, ML, MH, and CL, free of organic matter, stones larger than 75 mm (3-inches) in any dimension, other deleterious materials, and expansive values less than or equal to 2% when tested by the CBR method. For imported materials, that portion passing the No. 40 sieve shall be either nonplastic or shall have a liquid limit not greater than 40 and a plasticity index not greater than 15. Liquid limit and plasticity index shall be determined by ASTM D 4318. Where satisfactory materials are not available in sufficient quantity from required excavations, borrow materials shall be obtained from approved sources off Government-control land at the Contractor's responsibility.

2.5.3.4. Soil shall not be compacted in the tree protection zone.

2.5.4. Concrete Slab-On-Grade

2.5.4.1. Granular Termite Barrier (GTB): A 100 mm (4-inch) minimum thickness granular termite barrier shall be installed under the concrete slab of the covered gear wash area. The GTB shall be placed under the vapor barrier with a separation geotextile installed between the GTB and the capillary water barrier (CWB).

2.5.4.1.1. Exterior Perimeter Footings: When "stayform" is used to retain a vertical face along the inside of exterior footings, the bottom of the stayform shall be elevated 50 mm (2 inches) above the bottom of the footing to allow GTB material to migrate beneath the bottom of the stayform and separate the stayform and the subgrade. Along the outside edge of the footing, a minimum 100 mm (4-inch) wide, vertical GTB-filled-trench shall be provided. A root control fabric impregnated with plastic nodules containing trifluralin, Bio-barrier Root Control, or equal, shall be installed along the vertical interface between the GTB and the adjacent soil. The root control fabric shall provide continuous and effective root control for 15 years or longer. A cast-in-place concrete strip, 300 mm (12-inch) wide by 75 mm (3-inch) thick, with 5% transverse slope, shall be provided at the ground surface to cap the GTB strip. The concrete strip shall be reinforced with 6/6 X W2.0 X W2.0 WWF. Contraction joints shall be provided at maximum 4'-0" spacing.

2.5.4.1.2. The natural angle of repose of the GTB material is about 10H:3V when dry and 10H:3.75V when wet. Accordingly, GTB on sloping surfaces shall be placed at slopes no steeper than 3H:1V. This will require that the sloping faces of thickened-edge footings, including the under-side concrete fillet at edges of floor slabs, be designed with a batter no steeper than 3H:1V.

2.5.4.1.3. GTB Material Gradation.

Sieve Size	Percent Passing
(4.75 mm) No. 4	100
(2.36 mm) No. 8	95 - 100
(2.00 mm) No. 10	75 - 95

(1.70 mm) No. 12	35 - 50
(1.18 mm) No. 16	0 - 10

2.5.4.1.4. GTB Material Requirements

Rock Type:	Basalt
Specific Gravity (ASTM C 128):	2.70 to 2.80
SiO2 (ASTM C 289):	45% Minimum
L.A. Abrasion, % loss, 500 Revolutions (ASTM C 131):	20% Maximum
Moh Hardness Scale:	5 to 6

2.5.4.1.5. GTB material installed shall be clean and free of debris, dirt or other non-GTB material/substances that would compromise the GTB effectiveness. When GTB is installed in layers, the surface of the layer receiving additional GTB material shall be clean. Previously installed material if not clean shall be removed and replaced prior to installing additional GTB material.

2.5.4.1.6. Penetrations through the GTB other than that necessary for utility pipes/conduits shall not be made unless approved. Pipes laid in GTB material shall not be encased in sleeves or wraps that may provide a hidden path for termites. All utility pipes beneath the floor slab shall be encapsulated in minimum 100 mm (4 inches) of GTB material.

2.5.4.1.7. GTB material shall be compacted using approved equipment and methods.

2.5.4.1.8. No structure or appurtenance that is not protected by GTB material shall be allowed to be in direct contact with the dwelling unit itself

2.5.4.1.9. The Contractor's Design Proposal shall include typical GTB installation details beneath the slab and at pipe penetrations.

2.5.4.1.10. The Contractor shall submit a CQC plan to limit GTB material displacement before and during concrete placement. This is to maintain GTB material integrity and thickness for protection against termite infestation, and to maintain structural integrity of slabs and foundations.

2.5.4.2. Capillary Water Barrier and Vapor Barrier. Except as indicated hereinbelow, capillary water barrier and vapor barrier shall be placed beneath the concrete slab on grade. The capillary water barrier shall be 100 mm (4 inches) thick. The capillary water barrier material shall be a clean, crushed non-porous rock, crushed gravel or uncrushed gravel as approved. The maximum particle size shall be 40 mm (1-1/2 inches) and no more than 2 percent shall pass the 4.75 mm (No. 4) sieve. The capillary water barrier shall be compacted with a minimum of four (4) passes of a hand-operated, plate-type vibratory compactor. A vapor barrier shall be placed directly below the concrete slab and the GTB shall be installed under the vapor barrier but over a separation geotextile which is installed over the CWB layer.

The vapor barrier shall have the following properties:

Minimum 15-mil thick polyolefin geomembrane manufactured with ISO certified virgin resins.

Water Vapor Transmission Rate	ASTM E-96	not exceeding 0.006 gr./ft2/hr.
Permeance Rating	ASTM E-96	not exceeding 0.015 gr./ft2/hr.
Water Vapor Retarder	ASTM E-1745	meets or exceeds Class B
Puncture Resistance	ASTM E-1709	minimum 1970 grams
Tensile Strength	ASTM D-638	minimum 45 lbf/in.

Installation of the vapor barrier shall be per manufacturer's instructions with the following as the minimum; joints shall be lapped a minimum of 300 mm (12 inches) and sealed with the manufacturer's

recommended mastic or pressure sensitive tape. The vapor barrier shall be lapped over footings or sealed to foundations. The contractor shall check the vapor barrier surface, seams and penetrations at columns and utilities for damage and discontinuities prior to the concrete slab placement. The check shall be performed in the presence of the Contracting Officers Representative.

Standing water on the vapor barrier shall be removed prior to the concrete slab placement. The GTB shall be dampened, free of drainable water, and compacted the day before vapor barrier placement. The general contractor shall protect all exposed GTB surfaces from ponding of water or rainwater by sealing any entry points in uncompleted slabs or in unroofed buildings.

The separation geotextile shall have the minimum requirements for Class 2 as specified in AASHTO M 288-96 for geotextile survivability requirements.

2.5.5. Earthwork for Building and Utility Systems shall be design and constructed in accordance with UFGS Section 02315, Excavation, Filling and Backfilling for Buildings and Section 02316, Excavation, Trenching, and Backfilling for Utility Systems unless otherwise specified herein or as approved.

2.5.5.1. Satisfactory Materials. Imported satisfactory materials shall be free from stones larger than 75 mm (3-inches) in any dimension.

2.5.5.2. Excavation Permits. Prior to beginning excavation work, the Contractor shall obtain excavation permits from DPW **& AT&T HITS**. Contractor shall complete the DPW "Excavation Clearance Requirements" and submit the completed form to the Contracting Officer and DPW in order to obtain the following:

a. "DPW Excavation Permit" for Water, Sewer, Storm Drainage, Electrical, Gas, Fuel lines, **telecommunications** etc.

b. (DELETED)

Contractor shall carry both permits at all times during excavation.

2.5.5.3. Disposal. Excavated material not required or not satisfactory for backfill shall be removed from the site and disposed of off base.

2.5.5.4 Haul Route. Haul route shall be coordinated with the DPW traffic engineer.

2.5.5.5. Special Requirements. Water line trenches shall be of a depth to provide a minimum cover of 1 m (3 ft.) in areas subject to vehicular traffic and 0.70 m (2.5 ft.) in all other areas from the existing ground surface, or from the indicated finish grade, which ever is lower, to the top of pipe.

2.6. Grading and Storm Drainage System. Storm drainage system design shall be designed in accordance with City and County of Honolulu Storm drainage Standards and as specified herein or approved. Construction materials, execution and testing shall be in accordance with UFGS/CEGS Specification Section 2630a, Storm Drainage System; and as specified herein or approved.

2.6.1. General. Drainage from the Quadrangle interior areas building drains and adjacent areas bounded by Waianae Ave., Lewis St. and Foot Ave.; shall be intercepted and drained off site. In addition to the onsite drainage improvements, existing storm drainage lines along Lewis Street and along the realign reach of Foot Ave. shall be upgraded.

2.6.1.1 Lewis Street Drain lines. The existing earthen tunnel from drainage manhole DMH-D6-022 to DMH-D6 014 shall be abandoned and replaced with a new drain lines, inlet structures and manholes. The new drain line shall be located within Lewis St. to avoid disturbing the existing trees. The new Lewis Street drain line shall begin at DMH-D6-023 and end at DMH-D6-014. New drainage manholes shall be constructed as required to connect to the existing drainage system. The drainage

improvement scope shall include reconstructing all connecting drainage lines that will be affected by the Lewis St. drain line construction work.

2.6.1.2 Foote Avenue Drain lines. The existing drain lines along Foote Ave., from Glennan Street to Meigs Street, shall demolished, removed and replaced with new drain lines, inlet structures and manholes. The drainage improvement scope shall include reconnecting drainage lines that will be affected by the Foote Avenue drain line construction work.

2.6.1.3 **Proposals shall be based on the recommendations of the Draft Report, FY96 OMA Family Housing Master Plan and Infrastructure Study, Army Storm Drainage Infrastructure Study For Schofield Barracks, March 2001**. A copy of the Draft report and Master Plan Maps will be available for review at Honolulu District, Bldg. 230, Rm. 225, Fort Shafter, Hawaii. After award, Contractor is responsible for validating the study hydraulic analysis and recommendations. Photo copied excepts from the Storm Drainage Master Plan Maps are included in Attachment, Schofield Barracks Master Plan Maps, Draft Report, FY96 OMA Family Housing Master Plan and Infrastructure Study, Army Storm Drainage Infrastructure Study For Schofield Barracks, The following table indicates the minimum required improvements:

Table 2-3

BEGIN MH/INLET NO.	END MH/INLET NO.	EXST PIPE DIA. (INCH)	NEW PIPE DIA. (INCH)
DI-D6-085	DI-D6-084	10	18
DI-D6-084	DMH-D6-022	10	24
DI-D6-086	DMH-D6-022	**18x24 Box**	18
DMH-D6-023	DMH-D6-022	24	24
DMH-D6-022	DMH-D6-017	**30x54 Earthen Tunnel**	36
DI-D6-076	DMH-D6-019	12	18
DMH-D6-017	DMH-D6-014	**30x54 Earthen Tunnel**	42
DMH-D6-032	DMH-D6-047	24	36
DMH-D6-047	DI-D6-130	12	18
DMH-D6-043	DI-D6-121	10	18
DI-D6-121	DI-D6-124	10	18
DI-D8-131	DI-D8-130	8	12
DI-D8-130	DI-D8-066	8	18
DI-D8-066	DI-D8-126	8	24
DI-D8-065	DI-D8-066	18	36

2.6.2. Connections to Existing Systems. Connections to existing systems shall be made at locations as indicated on the drawings or as approved.

2.6.3. Grading and drainage design shall be properly coordinated with surrounding properties and facilities to insure that runoff do not cause damage outside of the project limits. Existing drainage patterns shall be maintained as much as practicable.

2.6.4. Sumps and low points where water ponds shall be avoided whenever practical so as to preclude flooding of buildings and roads when design capacities of drainage systems are exceeded. Where sumps can not be avoided, higher design capacities may be directed for systems draining the sumps and positive overland flow relief provided to preclude flooding of dwelling units and critical utility appurtenances such as electrical transformers.

2.6.5 Inlets and Manholes.

2.6.5.1 Materials shall be of cast-in-place reinforce concrete or pre-cast reinforced concrete sections. Precast manholes shall have eccentric cone tops to permit vertical descent within the manhole.

2.6.5.2 Locate manholes or inlets at intersections, changes in alignment or grade or size, at junctions with laterals of branches or wherever entry for maintenance is required. Storm drain inlets shall be located so that no collection swales flow across a street or sidewalk to reach a storm drain other than where cross gutters are used. For streets and roadways, side opening catch basins are preferable. Distance between points of entry will not be more than 90 meters (300 feet) for conduits with a minimum diameter smaller than 30 inches and up to 150 meters (500 feet) for diameter 30 inches or larger.

2.6.5.3 Inside dimensions of manholes will not be less than 0.760 meter (2.5 feet). Inside dimensions of inlets will provide for not less than 75 mm (3-inches) of wall on either side of the outside diameter of the largest pipe involved or not less than 0.760 meter (2.5 feet), which ever is greater.

2.6.5.4 Manhole frame and cover shall be round will a minimum clear opening of 760mm (30 inches).

2.6.5.5 Manholes and inlets deeper than 900 mm (3 feet) shall have a fixed stainless steel ladder, Type 316 Stainless Steel (SS).

2.6.6. Open ditches and channels are not allowed unless specifically approved. Grassed swales shall have a one (1) percent minimum invert slope unless the invert is paved with and approved concrete lining. Open areas shall be drained by field inlets and an underground collection system, utilize existing system as much as possible. Overland flow shall be held to a minimum. Swales shall have cross-sections that do not restrict the use of powered mowing equipment.

2.6.7. All streets shall be crowned or sloped to drain. Concrete gutters shall be provided on both sides of streets. Street drain inlets shall be curb opening type. Drop inlets with grates are not allowed.

2.6.8 Maximum Gutter Flow. Maximum flow in all gutters shall be restricted to the quantity, which will cause flooding of 1/2 of the adjacent traffic lane at the design storm. When this flow is reached, it shall be intercepted by catch basins and removed to an underground drainage system.

2.6.9. Minimal size for drain pipes along roadways and vehicle traffic areas shall be 450 mm (18-inches) and pipe material reinforced concrete. Minimal pipe size for all other areas shall be 300 mm (12-inch) and materials shall be reinforced concrete pipe, schedule 40 PVC pipe, or smooth interior corrugated polyethylene pipe. For corrugated polyethylene pipe, the couplings joints shall be the watertight type.

2.6.10. Grade Transitions around Existing Tree. The natural grade shall be maintained within the tree protection zone. Surface drainage away from existing trees shall be provided. For additional tree protection requirements, see Subsection 9, Landscaping Design.

2.6.11. EPA National Pollution Discharge Elimination System (NPDES) Permits. The Design-Building Contractor shall determine if a permit is required. If the permit is required, the Contractor shall prepare the documentation for the Storm Water Prevention Plan (SWPPP) and monitoring plan and submit to the Contracting Officer's Representative.

2.6.12. Storm Runoff Calculation. Storm runoff shall be calculated with consideration for the following:

2.6.12.1. Select design values to be used in the storm drainage design calculations, including rainfall intensity, drainage area, and runoff coefficients.

2.6.12.2. Select storm drainage plan with respect to planned connections to the existing storm drainage system, when applicable.

2.6.12.3. Alternate schemes considered in arriving at selected storm drainage plan.

2.6.12.4. Principal means of collection and disposal of storm water in the new storm drainage system. Include calculations for runoff, sizing of pipe and drainage structures (inlets and drainage control structures and roof drainage pipe).

2.6.12.5. Method proposed for handling roof runoff from gutter downspouts (roof drain collector system into drainage system).

2.6.12.6. Connections of building's mechanical drains to outside drainage system, where applicable, and cross referencing to the appropriate section and design discipline, when required.

2.6.13 Specific Storm Drainage Criteria.

A 10-year 1-hour intensity design storm shall be used to calculate the runoff. The time of concentration (Tc) for storm drainage system shall be no less than 10 minutes for paved areas and 20 minutes for turfed areas. Runoff shall be controlled by a storm drainage system properly designed to eliminate erosion.

Storm drainage systems will be so designed that the hydraulic gradeline for the computed design discharge in as near optimum depth as practicable and velocities are not less than 0.760 m/s2.5 feet/s when drains are one third or more full.

2.6.14 Sidewalk Culverts. Sidewalk culverts are not permitted.

2.6.15 Abandoned Manholes and Earth Tunnel.

2.6.15.1 Abandoned Manholes. Connecting lines to each manhole shall be pugged with concrete. The plug shall extend from the manhole to a minimum 0.6 m (2 ft.) into the abandoned line. Abandoned manholes shall have the bottoms cracked to permit subsurface water drainage though the bottom. The manhole shall be backfilled with (a) compacted granular material, base course or S4C or (b) lean concrete. The manhole cover should be completely removed along with the manhole cone or the upper 1 m or (3 ft.) for cast-in-place manholes.

2.6.15.2 Abandoned Earth Tunnel. Abandoned earthen tunnel lines shall be filled by pumping in controlled low strength material and plugged with concrete at each manhole end.

2.7. Water Distribution System. Water system shall be designed in accordance with TM 5-813-5, Water Supply Distribution Systems (A copy of TM 813-5 is attached.) and Military Handbook Fire Protection for Facilities Engineering, Design and Construction, (Mil Hdbk 1008c); and as indicated herein or approved. Construction materials, execution and testing shall be in accordance with UFGS Section 02510, Water Distribution System; and as specified herein or approved.

2.7.1. General. The existing water systems servicing the existing quadrangle facilities shall be removed and replaced (unless other wise indicated or approved) with upgrade systems to support renovated and new facility service requirements and to meet current design and construction standards.

2.7.2. Connections to Existing Systems. Contractor shall connect to the existing 300-mm (12-inch) water main along Waianae Avenue, as indicated on the drawings or as approved.

2.7.3. Mains. Mains shall be considered as that part of the distribution system that supplies fire hydrants. Water mains shall be looped with no dead ends unless specifically approved in writing. Minimum main size shall be 200 mm (8 inches). Mains shall be ductile iron or Polyvinyl chloride (PVC). All ductile iron pipes, cast iron fittings to include couplings and valves shall be wrapped with 8-mil thick polyethylene encasement per AWWA C105.

2.7.4. Main Locations. Mains shall be generally located along streets setback a minimum of 1.5m (5 feet) from pavement areas, and on the street side opposite from electrical/telephone/CATV lines. Mains shall be setback a minimum of 1.5 m (5 feet) from any building or structure. This shall be specifically coordinated between civil and electrical design disciplines during proposal stage.

2.7.5. Main Markers and Tracing Wires. All mains shall be provided with commercial plastic marking tape specifically manufactured for this use. Tracing wire shall be copper solid #10 and shall extend into valve box stations.

2.7.6. Flow and Pressures. The distribution system must reliably and economically supply water, in adequate quantities and at adequate pressures. Criteria for determining domestic water demands shall be per TM 5-813-1/AFM 88-10, Volume 1., Chapter 2. Criteria for determining fire flow demands shall be per Mil Hdbk 1008c. Minimum ground-level residual pressures at fire hydrants will be at least 10 pounds per square inch while supplying flows.

2.7.7. Hydrant Flow Test Data. The following flow test data are provide for offeror's use to evaluate available water supply and design water systems: (Note that after award of D-B contract, the contractor is responsible for verify the pressure and flow capacity of the system. Any subsequent hydrant flow tests shall be conducted with the Schofield clear well pumps off. POC for Schofield Barracks Water Plant is Wade Nakai, 655-2510.)

Test Date/Time: 30 Jan. 2001/10:00 am

Clear Well Pumps Off/On: Off*

Static/Residual Pressure Hydrant ID: F-1 (Corner of Waianae Ave. and Lewis St.)
Static Pressure (psi): 47
Residual (psi): 42

Flow/Test Hydrant ID: F-5 (Waianae Ave. and adjacent to Bldg. 627)
Nozzle Diameter Flowed: 2.5 -inch
Flow (GPM): 890

2.7.8. Fire Hydrants. Fire hydrant special requirements are as follows.

2.7.8.1. Type and Nozzles. Fire hydrants shall be wet-barrel with one 4-1/2 inch and two 2-1/2 inch outlets, with the center of hose outlets a minimum of 0.45 m (18 inches) above finish grade. Each hydrant shall include a quick coupling type adapter for fire pumper truck connection. Each hydrant shall have a quick-coupler furnished for the 115-mm (4.5-inch) outlet. Each hydrant supply shall be provided with minimum 6" connection through shutoff valve and isolation valve box.

2.7.8.2 Spacing. Hydrant distributions will conform to TM 5-813-5/AFM 88-10, Vol. 5., Mil Hdbk 1008c and the following requirements.

2.7.8.3. Hydrants shall be located a minimum of 15.2 m (50 feet) from buildings protected and in no case will hydrants be located closer than 25 feet to a building, except where building walls are blank firewalls. Hydrants shall be located near intersections for maximum coverage and on fire truck approaches to buildings, especially for dead-end streets. At least one hydrant shall be located within 150 feet of the building sprinkler riser fire department connection. Hydrants shall not be located in sidewalks or where obstructed by structures or landscaping. Hydrants shall not be located near electrical transformers or all types of utility manholes or handholes to preclude flooding should a break occur.

2.7.8.4. Hydrant locations along streets shall be identified with approved raised blue pavement reflector markers offset 100 mm (4 inches) towards the hydrant from the road center.

2.7.8.5. Hydrants shall be painted Norwood brown; exact color to be coordinated with the Contracting Officer.

2.7.9. Service Laterals and Water Meters. Meters shall be provided to allow the monitoring of water consumption for Quad F buildings. Meters shall be adequately sized to meet the building water flow and pressure demand. Maximum velocity shall be 10 feet per second. Meters shall be located in accessible areas out of the way of vehicular traffic. Special requirements are as follows.

2.7.9.1. Water Meters shall be of one manufacturer and of the same model for a given size. Meters shall be of the displacement or vertical turbine type conforming to AWWA C701 Class II unless otherwise specified or approved. Meters shall be sized and of the appropriate type to insure adequate service pressures and flow can be maintained within manufacturer sizing recommendations. The main casing shall be bronze with stainless steel external fasteners. Registers shall be straight -reading type, shall be permanently sealed and shall read in U.S.-gallons. Digital indicator-totalizer shall be sealed and magnetically coupled with the driving mechanism. A leak detector hand shall be provided to indicate very low flow (due to leakage). Connections shall be suitable to the type of pipe and conditions encountered. Register type shall be an encoder-type remote register designed in accordance with AWWA C707. Remote mounting adapter kit with up to 15.24m (50 ft) of cable shall be used to connect the water meter to the remote sensor on the building. Meters shall comply with the accuracy and capacity requirements of AWWA C701.

2.7.9.2. Meters Boxes. Meters shall be installed in approved meter boxes or vaults large enough for the installation of a shut off valve and meter and shall be large enough for easy maintenance and removal of meters. Meter registers shall be readily readable with reading ports in box covers provided. Shut off valves shall be provided on each side of meters. Straight pipe sections shall be provided when recommended by the manufacturer. Meters larger than 50 mm (2 inches) shall be provided with bypass line and valve of approved size. Meter boxes set in paved areas subject to vehicular traffic shall be cast iron, or concrete with cast iron lid and cast iron meter reader lid. Boxes set in sidewalks, not subject to vehicular traffic, shall be concrete with cast iron lid and cast iron meter reader lid. Plastic boxes and lids shall not be used. Box height shall extend from invert of the meter to final grade at the meter location. The lid shall have the word “WATER” cast in it.

2.7.9.3. Contractor shall as directed provide to the Contracting Officer for turn over to DPW a minimum of one-meter splice and one spare meter each size installed in this project.

2.7.9.4. When a meter services a single building, the pressure regulator shall be installed above ground.

2.7.9.5. Service lines shall be engineered with building interior plumbing to insure that wide fluctuations in pressure, water flow, and temperature do not occur. Meter head losses shall be included in design analyses hydraulic calculations for domestic services.

2.7.9.6. Each building shall have an exterior shut off valve with valve box installed underground.

2.7.9.7. Service lines shall not cross streets and driveways except for connections to mains.

2.7.9.8. Service lines shall be copper pipe and fittings, Type “K”, polyvinyl chloride (PVC), or ductile iron unless other wised approved.

2.7.10. Water main Clearances to Sewers. Water mains shall be laid horizontally 3 m (10 feet) or more from sanitary sewers. Exception is where the bottom of the water pipe is a minimum of 450 mm (18 inches) above the sewer pipe top, in which case, the horizontal separation shall be 1.8 m (6 feet) or greater. Service lines shall have a minimum vertical separation of 300-mm (12 inches) above sewer laterals unless otherwise approved. Where water mains cross within 450 mm (18 inches) above or any distance below gravity flow sanitary sewer lines, the sewer pipe shall be encased with an approved reinforced concrete jacket of 150 mm (6 inch) minimum cover around the pipe to a distance of 3 m (10 feet) horizontally from the water line. Encasement shall start and end at sewer pipe joints.

2.7.11. Miscellaneous Appurtenances. Miscellaneous appurtenances shall be as approved.

2.7.12. Bacteriological Disinfection.

Before acceptance of potable water operation, each unit of completed waterline shall be disinfected in accordance with UFGS Section 2510, Water Distribution System and AWWA C651 unless otherwise specified herein or approved. From several points in the unit, the Contracting officer will take samples of the water in proper sterilized containers for bacterial examination. The unit will not be accepted until satisfactory bacteriological results have been obtained. Contractor shall be responsible for neutralization of and proper disposal of testing and disinfection waters in accordance with State of Hawaii and Tripler Army Medical Center, Preventive Medicine Office, regulations, etc. The chlorinated water may be used for watering grassy areas if the chlorine concentration is reduced to that of drinking water.

2.7.13. Lead Residual. Following the bacteriological disinfection and testing, the system shall be flushed with a sufficient velocity of water and sufficient tests performed at each hot and cold water discharge point until no more than 15 ppb lead residuals remain in the system. All test and samples shall be performed in accordance with state and, if applicable, Federal regulations. Samples for testing are to be collected after a 6-hour continuous period of no flushing, and will be considered first draw samples. The commercial laboratory shall be certified by the state's approving authority for examination of potable water. Lead residual tests results shall be submitted to the Contracting Officer. The system will not be accepted until satisfactory bacteriological results and lead test residual test results have been obtained. All flushing and testing for lead residuals, including.

2.7.14. Interruption of Water Supply. Contractor shall inform the Contracting Officer a minimum of 45 calendar days in advance of any interruption of service in the existing water system. Valves shall be closed and opened only by DPW authorized personnel unless otherwise approved in writing.

2.7.15. Pressure Reducing Valves. Main line pressure reducing valves are not permitted in this project.

2.7.16. Protection from Fire Systems. Potable water supplies to fire protection systems, including but not limited to stand pipes and automatic sprinkler systems, shall be protected from backpressure and back siphonage by a double check valve assembly. The valve assembly shall be located down stream of the post indicator valve and before the building riser pipe connection. Double check valve assembly shall in accordance with AWWA C506 and NFPA 24. Valve assemblies shall be of one manufacturer and of the same model for a given size.

2.7.17. Post Indicator Valves. Every connection from a private fire service main to a building shall be provided with a listed indicating valve so located as to control al sources of water except fire department connections unless other wise approved by the authority having jurisdiction. Post indicator valves shall be located not less than 12.2 m (40 ft) from buildings. When necessary to place a valve closer to a building, the indicator post shall be located at a blank part of a wall.

2.8. Sanitary Sewage System. The sanitary sewage system shall be designed in accordance with Technical Instructions, TI-814-10, Wastewater Collection; and as specified herein or approved. Construction materials, execution and testing shall be in accordance with UFGS Section 02531A, Sanitary Sewers and as specified herein or approved.

2.8.1 General. The existing sewer systems servicing the existing quadrangle facilities shall be removed and replaced (unless other wise indicated or approved) with upgrade systems to support renovated and new facility service requirements and to meet current design and construction standards.

2.8.2. Connections to Existing Systems and Layouts. Contractor shall connect to existing sewer manhole S-500-28, as indicated on the attached RFP drawings or as approved. Designer shall ensure that down stream systems have adequate capacity to meet peak design flows.

2.8.2.1. Sewer mains shall be located along street or off-streets in readily accessible areas. Sewer mains in streets shall be located such that manholes are installed 2.4 m (8 feet) or greater from curb faces and away from street low points to minimize water infiltration.

2.8.2.2. Mains shall be 200-mm (8 inches) minimum size.

2.8.2.3. All mains shall be provided with copper solid #10 tracing wire.

2.8.2.4. Prior to design, the project civil engineer shall inspect the proposed connection points to existing manholes and determine if the sewer line is flowing near capacity. If the existing line is flowing near capacity, the invert of the new main should be set to be above the crown of existing main.

2.8.2.5. Connections to existing mains should be less than 90 degrees to the main line flow.

2.8.2.6. Pipe material for sewer mains and laterals shall be plastic pipe within minimal pipe joints.

2.8.3. Manholes.

2.8.3.1. Precast manholes shall have eccentric cone tops to permit vertical descent within the manhole.

2.8.3.2. Manholes shall have essentially watertight walls and pipe connections to control ground water infiltration.

2.8.3.3. Manholes deeper than 900 mm (3 feet) shall have stainless steel rungs, Type 316 Stainless Steel (SS).

2.8.3.4. Each new or modified manhole that is located in roads or grass areas that are located in low areas subject to flooding shall be installed with manhole cover inserts to prevent inflow of rainwater; reduce manhole rattling and flipping due to street traffic; and prevent dirt and debris form entering collection system through manhole cover. Manhole insert material and dimensions shall be in accordance with City and County of Honolulu Standards and as specified herein.

2.8.3.4.1. The inserts shall be made of corrosion proof material suitable for atmospheres containing hydrogen sulfide and diluted sulfuric acid as well as other gases associated with wastewater collection. The body of the material shall be made of high density polyethylene co-polmer, or approved equal that meets ASTM Specifications Designation D1248, Class A, Category 5, Type III, equal to Marlex HXM 50100 (extra high molecular weight hexene co polymer).

2.8.3.4.2. The manhole inserts shall have a minimum impact brittleness temperature of 105 degrees Fahrenheit or less The thickness shall be uniform 1/8-inch or greater. The material shall be firm enough such that the inserts will not fold and fall into the manhole due to any accumulation of debris and water. It shall also be resistant to environmental stress cracking.

2.8.3.4.3. The gasket shall be made of closed cell neoprene. The gasket shall have pressure sensitive adhesive on one side and be placed under the weight bearing surface of the manhole insert by the manufacturer. The adhesive must be compatible with the insert material to form a long lasting bond in wet or dry conditions.

2.8.3.4.4. A lift strap shall be attached to the rising edge of the bowl of the manhole inserts with a stainless steel rivet. The lift strap shall be made of one-inch (1”) wide, woven polypropylene web and sheared on all cut ends to prevent unraveling. The inserts shall be sized to fit City and County of Honolulu Standard Type SA manhole frame and covers.

2.8.3.5. New manholes should be located to avoid bends 90 degrees or larger.

2.8.3.6. Drop Manholes, if required, shall be in accordance with City and County of Honolulu standards.

2.8.3.7. Abandoned Manholes and Sewer lines. Abandoned sewer lines should be plugged with concrete at each end. The concrete plug shall extend from the manhole to a minimum 0.6 m (2 ft.) into the abandoned line. Abandoned manholes shall have the bottoms cracked to permit subsurface water drainage though the bottom. The manhole shall be backfilled with (a) compacted granular material, base course or S4C or (b) lean concrete. The manhole cover should be completely removed along with the manhole cone or the upper 1 m or (3 ft.) for cast-in-place manholes.

2.8.4 Sewer Laterals.

2.8.4.1. Laterals minimum size shall be 150 mm (6 inches). Laterals shall be sized based upon fixture unit flow.

2.8.4.2. Minimum lateral slope shall be 1.0 percent unless otherwise approved.

2.8.4.3. Building connections shall be planned to eliminate as many bends as practical and provide convenience in rodding. Bends greater than 45 degrees made with one fitting should be avoided; combinations of elbows such as 45-45 or 30-60 degrees should be used with a cleanout provided. Only house sewer lines may be placed under buildings; however, one sewer lateral may be provided for one housing building with multiple dwelling units provided adequate cleanouts are furnished to effect easy maintenance. Such sewer designs shall be as approved. Multiple dwelling unit single laterals shall have a cleanout installed where the line exits the structure and within 1.5 m (5 feet) of the exterior wall.

2.8.4.4. Laterals shall use standard “wye” fittings. Cleanouts shall be provided at all junctions and major bends as directed. However, a manhole must be used if the connection is more than30 m (100 feet) from the building cleanout.

2.8.4.5. Cleanouts shall be of approved materials and design. They shall be installed on all building connections to provide a means for inserting rods in to the underground pipe and installed flush with the finish ground to preclude damage to mower equipment and tripping. Two-way cleanout shall be provided at building connections to permit complete rodding of the building connection. Preferably the cleanout will be of the same diameter as the building sewer, and never smaller than 150 mm (6-inches). Cleanout cap shall be recess type. Cleanout tops in grassed areas shall be provided with a 375 mm (15 inch) square by 150 mm (6 inch) thick concrete collar reinforced with #3 rebar on all sides.

2.8.4.6. New lateral inverts should be above the crown of existing mains.

2.8.5. Sewer Pipe Joints. Sewer mains within the tree drip line shall be wrapped at the joints with a ‘bio’ or root type barrier membrane. Root barrier shall be suitable for pipe joint wrap application and shall be installed in accordance with the manufacturer’s specifications.

2.9. Mechanical Design - Site Redevelopment.

2.9.1 Underground Chilled Water (for Air Conditioning) and Hot Water (Domestic) Distribution Systems: Where used, systems shall comply with the requirements of CEGS 02555 titled “Pre-Fabricated Underground Heating/Cooling Distribution System”. It should be noted that existing Quad F chilled water distribution system is looped to the chilled water distribution system of Quad E. As-built drawings (Hawaiian Electric drawings dated August 2000 which are provided as part of this RFP package)) show the location of this loop piping. Design for this project shall replace the Quad F distribution system and the portion of the chilled water system that feeds Quad E up to Lewis Street. New chilled water distribution layout within Quad F will be left to the designer

2.9.2 For additional exterior site design requirements, see Subsection, General Design - Mechanical.

2.10. Electrical Design - Site Redevelopment.

2.10.1 For exterior electrical distribution, lighting, telecommunication, cable television system general design requirements, see Subsection, General Design - Electrical.

3. GENERAL DESIGN - ARCHITECTURE

3.1. General Requirements. This section applies to all buildings under this RFP unless specifically noted otherwise in sections 13 through 18.

3.2 Sound Attenuation. This paragraph is limited to new construction.

3.2.1. Testing. Certified proof-of-performance field tests will be conducted to demonstrate that the floor and wall systems as constructed provide the required sound isolation. Tests for air-borne sound shall be made in compliance with ASTM E336. Tests for impact sound shall be made in compliance with ASTM E1007. Testing of 10 percent (minimum) of each type of floor and wall system is required. Location of test sites will be chosen at random by the Contracting Officer.

3.2.1.1.1 Any wall or floor system found to be inadequate shall have the deficiencies corrected and the additional qualifying tests conducted at the contractor's expense. Testing at the contractor's expense of greater than 10 percent of each system may be required if the Contracting Officer determines that the quality of construction requires this additional testing.

3.2.2. Party walls and party floors (floor/ceiling construction between different organizational units) shall be designed to provide the minimum airborne sound transmission ratings and impact isolation ratings stated in Table 3-1.

TABLE 3-1 - SOUND TRANSMISSION STANDARDS FOR PARTY WALLS AND PARTY FLOOR CONSTRUCTION

Area	FSTC[1]	FIIC[2]
Party Walls	52	N/A
Party Floors at Primary Sleeping/Living Rooms.	52	65
Party Floors at Bathrooms, Utility, Laundry, & Equipment Rooms.	52	57

Note[1]: Field Sound Transmission Class. See ASTM E336.

Note[2]: Field Impact Isolation Class. See ASTM E1007.

3.2.3. Insulation. Insulation shall be provided to meet the following requirements:

Thermal and sound insulation shall have a flame spread rating of 25 or less and a smoke development rating of 50 or less exclusive of the vapor barrier when tested in accordance with ASTM E 84. A vapor barrier shall be provided on the warm side of exterior and ceiling insulation for thermal insulation.

3.2.3.1. Urethane is not allowed as an insulation material.

Interior Finishes.

3.3.1. Walls and ceilings. Provide 13 mm (1/2-inches) gypsum wallboard, taped and slightly textured finished. Water-resistant wallboard shall be used in wet areas such as bathroom and laundry rooms, and cementitious backer board shall be used for ceramic tile applications. Textured ceiling finish may be provided in areas other than laundry or bathrooms. Interior finish on walls and ceilings shall be in accordance with NFPA 101. Provide access to maintain and service equipment above the ceiling.

3.3.2. Flooring and base. Laundry and utility room flooring shall be sheet, seamless vinyl with wood or vinyl base. All other flooring areas shall have 2 mm (3/32-inches) vinyl composition tile with wood base

or resilient base. Public bathrooms shall have ceramic tile flooring with ceramic tile base, terrazzo, or seamless sheet vinyl with premolded vinyl base or terrazzo base to match.

3.3.2.1. Sheet vinyl shall conform to ASTM F 1303, Type II, Grade 1. Sheet and tile vinyl flooring shall be installed as a monolithic material with seams welded or bonded for a seamless installation.

3.3.2.2. Ceramic tile shall conform to ANSI 137.1, moderate or heavy grade.

3.3.(3) Paint Finishes and Coating:

3.3.3.1. Interior surfaces, except factory prefinished material, shall be painted a minimum of one prime coat and one finish coat. Baths and laundry rooms, and all their painted trim shall be finish painted with semi-gloss latex. Natural finished interior doors are acceptable. All other areas shall be water-based latex low sheen washable eggshell finish for walls/trims and water-based latex low sheen washable eggshell finish for ceilings. Oil-based paint is not allowed except for surfaces that require special coating. Interior paint finish may be textured. When semi-gloss and low sheen painted surfaces are adjacent to each other, the wall surfaces in the room shall be finished with semi-gloss paint to avoid having two different finishes adjacent to each other.

3.3.3.2. All exterior surfaces, except brick, and factory finished siding, including all utility appendages, shall receive a minimum of one prime coat and two finish coats of paint. Exterior paint shall be water-based latex. Exterior low sheen stains (two coats) will be acceptable, where appropriate for wood. Stucco shall be provided with integral color and shall be sealed with a sealer as recommended by the manufacturer. Oil-based paint is not allowed except for surfaces that require special coating.

3.3.3.2.1. If CMU is used, a base coat solvent-thinned block filler, Fed. Spec. TT-F-1098 shall be used for the interior and a base coat of cement-emulsion filler shall be used for the exterior. The option to use Fed. Spec. TT-F-1098 for the exterior may be exercised if contractor can demonstrate that multiple coats applied will provide a pinhole free finish.

3.3.3.2.2. Finish coats for all CMU and concrete surfaces shall be Fed. Spec. TT-P-19.

3.3.3.3. Exterior Finish coatings will be the manufacturer's standard base coat/finish with acrylic coating systems.

3.3.3.4. Application of Paint: Paint shall be applied by brush or roller. Spray painting method shall be used only under approved conditions. Spraying shall be done only when there is no wind, or under very low wind velocity. When wind velocity increases, all spraying operation shall be stopped as directed by the Contracting Officer. Before start of spraying, all surfaces that do not require painting shall be completely masked and protected. Adequate drop cloths shall be provided over floors, adjacent sidewalks, and over all cars parked nearby that may be stained or damaged from the spray work. The Contractor shall be liable for all damage resulting from the spray painting operation. All such damages shall be satisfactorily repaired and resolved at no additional cost to the Government. Adequate ventilation shall be provided during paint application. Respirators shall be worn by all persons engaged in spray painting. Adjacent areas shall be protected by approved precautionary measures.

3.3.4. Painting Schedule: Primers, paints, and stains shall meet or exceed the latest Federal publications listed, and shall be lead free conforming to The Consumer Product Safety Act (CPSA). Interior surfaces, except factory prefinished material, shall be painted a minimum of one prime coat and one finish coat. All walls and ceilings in baths, laundry, utility rooms, and all painted trim shall be painted with semi-gloss latex. Colors shall be submitted by the Contractor and approved by the Contracting Officer. Blown-on acoustic finish is prohibited.

3.3.4.1. Paints shall meet the following publications. All paints and stain, including color pigments, shall be "lead-free:, conforming to The Consumer Product Safety Act (CPSA). The following publications are for reference only.

Federal Specifications (FS):

TT-C-542	Coating, Polyurethane, Oil-Free, Moisture Curing
TT-C-555	Coating, Textured (For Interior and Exterior Masonry Surfaces)
TT-E-489	Enamel, Alkyd, Gloss (For Exterior and Interior Surfaces)
TT-E-2784	Enamel (Acrylic-Emulsion, Exterior Gloss and Semigloss)
TT-P-19	Paint, Latex (Acrylic Emulsion), Exterior, Wood and Masonry
TT-P-28	Paint, Aluminum, Heat Resisting (1200 Degrees F.)
TT-P-38	Paint, Aluminum, Ready-Mixed
TT-P-645	Primer, Paint, Zinc-Molybdate, Alkyd Type
TT-S-176	Sealer, Surface, Varnish Type, Floor, Wood and Cork
TT-S-223	Sealer, Surface, Floor, Water Emulsion Type
TT-S-708	Stain, Oil; Semi-Transparent, Wood, Exterior
TT-S-00l992	Stain, Latex, Exterior For Wood Surface
TT-V119	Varnish, Spar, Phenolic-Resin
TT-V-121	Varnish, Spar, Water-Resisting

Commercial Item Description (CID):

A-A-1500	Sealer Surfaces (Latex Block Filler)
A-A-1546	Rubbing Varnish
A-A-1632	(Basic) Varnish, Asphalt
A-A-1788	(Basic) Varnish, Oil: Interior
A-A-2246	Paint, Latex (Gloss, Interior)
A-A-2247	Paint, Latex (Semigloss, Interior)
A-A-2248	Paint, Latex, (Flat, Interior)
A-A-2235	(Basic) Sealer, surface (Varnish Type, Wood and Cork Floors)
A-A-2336	Primer Coating (Oil-Alkyd, Exterior Wood, White and Tints)
A-A-2339	(Basic) Stain (Wood, Solvent-Dye Type)
A-A-2340	Primer Coating (Latex, White, for Gypsum Wallboard)
A-A-2542	(Basic) Sealer, Terrazzo and concrete Floors, Water based
A-A-2834	Urethane, Waterborne (Low VOC, Clear)
A-A-2867	(Basic) Coating, Polyurethane, Single component Moisture Cure, Alipathic
A-A-2962	(Basic) Enamel, Alkyd
A-A-2994	(Basic) Primer Coating, Interior, for Walls and Woods

Steel Structures Painting Council (SSPC) Specifications:

SSPC -Paint 5	(1991) Zinc Dust, Zinc Oxide & Phenolic Varnish Paint
SSPC-Paint 18	Chlorinated Rubber Intermediate Coat Paint
SSPC-Paint 20	(1991) Zinc-Rich Primers (Type I - Inorganic and Type II - Organic)
SSPC-Paint 25	(1991) Red Iron Oxide, Zinc Oxide, Raw Linseed Oil and Alkyd Primer (Without Lead and Chromate Pigments)
SSPC-Paint 26	(1991) Slow Drying Linseed Oil Black Maintenance Primer (Without Lead and Chromate Pigments)
SSPC SP 1	(1982) Solvent Cleaning
SSPC SP 2	(1995) Hand Tool Cleaning
SSPC SP 3	(1995) Power Tool Cleaning
SSPC SP 6	(1994) Commercial Blast Cleaning
SSPC SP 7	(1994) Brush-Off Blast Cleaning

3.3.4.2. Cement-Emulsion Fill Coat: Fill coat shall be an acrylic-based fill coat and shall consist of the following:

White Portland cement: 7.5 kg (16.5 pounds).

Aggregate: 15.2 kg (33.5 pounds).

Mixing liquid: 2.8 L (0.75 gallon).

Potable water: 3.8 L (1.0 gallon) maximum.

Exterior emulsion paint: 3.8 L (1.0 gallon).

3.3.4.2.1. The white Portland cement shall conform to ASTM C 150, Type I. The aggregate shall be washed silica sand of the following gradation:

U.S. Sieve Size	Percent Sand (by Weight) Passing Individual Sieve
20	100
30	95 - 100
50	30 - 65
100	0 - 10
200	0 - 1

3.3.4.2.2. The mixing liquid shall be a factory-prepared acrylic containing 46 to 47 percent solids. The exterior emulsion paint shall be exterior acrylic emulsion paint conforming to Fed. Spec. TT-E-2784, Type III.

3.3.4.3. Paints used on surfaces in areas of high humidity where mildew is possible and on fabric or vapor barrier over insulation shall contain a mildewcide. The mildewcide will not adversely affect the

color, texture, or durability of the coating. The mildewcide shall be incorporated into the paint by the manufacturer and shall attain a surface disfigurement rating of 8 or greater when tested in accordance with ASTM D 3273 and evaluated in accordance with ASTM D 3274. Mercurial mildewcide and insecticides shall not be used in paints.

3.3.4.4. Colors shall be as approved from schemes submitted with proposal. All interior paint surfaces shall be painted off-white. Each proposal shall include three basic exterior and interior color coordinated schemes and color samples. Floor tile, and miniblinds, shall be neutral colors. Final selection of exterior colors will be made by the Installation Commander, (USAG-HI). Exterior color selections shall conform to the Installation Exterior Architectural Plan (IEAP).

All exterior wood trim to include framing members around garage door openings shall be “back-primed” (surfaces that will be inaccessible to field painting after installation of the wood trim shall be primed with one coat of primer before installation).

3.4. Roofing and Drainage. Replace roofs of all buildings. Minimum slopes for existing roofs shall be 1:24 (1/2-inch: 1 ft). **Project includes repair of roofs for all Quad F buildings.**

3.4.1. Roof water. Conductor heads, scuppers and downspouts shall be provided for all roof areas. Provide calculation of gutter and downspout size if the existing conductor heads, scuppers and downspout dimensions can not be determined. Calculations should be in accordance with SMACNA-02, Architectural Sheet Metal Manual. Downspouts draining onto a lower roof shall have metal or plastic splash deflectors. Splash blocks shall be provided under downspouts if not connected to the storm drainage system.

3.4.2. Roof surface. Roof surfaces shall be light colored to minimize heat gain. Roof water shall be diverted away from entrances and foundations. Flashing made of nonferrous metal are highly desirable. Splash blocks shall be provided under downspouts not connected to storm drainage system.

3.4.3. Sheet Metal Work. Sheet metal materials, in order of preference, are as follows:

Order of Preference	Sheet Metal Materials
1	Stainless Steel
2	Copper
3	Aluminum
4	PVC (for gutters and downspouts only)

Note: Flashing - Continuous stepped flashing to be installed at wall adjacent to roof slope. Design to facilitate easy maintenance and removal of roofing without removing or damaging the wall sidings. Galvanized sheet metal shall be shop-primed and painted. Provide metal drip edge of flashing at roof eaves.

3.4.4. Conductor heads, scuppers and downspouts shall be adequately sized to meet the following Design Rainfall Intensities:

Schofield Barracks: Design Rainfall Intensity (hourly in inches for a 5-minute period to be expected once in 10 years) = 188 mm (7.4 inches).

3.5. Exterior Finishes. Emphasis shall be placed on low maintenance and durability for exterior finish materials. Materials shall be residential in size, scale, and texture. Exterior wall materials are as follows:

Order of Preference	Exterior Wall Materials
1	Concrete - painted

2	Concrete masonry units (CMU) - painted.
3	Portland cement plaster (stucco)on metal lath with integral colored finish.
4	Exterior Insulation and Finish System/Exterior Finish System.

Note: Other exterior wall materials of equal quality and durability shall be evaluated and their position in the order of preference shall be considered where appropriate.

3.5.1. Termite decay and protection for exterior wood materials (siding, trims, etc.) shall be in accordance with National Wood Window and Door Association (NWWDA) Standards. Each piece of treated material shall bear identification of the testing agency to indicate performance in accordance with NWWDA.

3.5.2. Trim elements. Aluminum or vinyl clad wood trim is preferred over painted or stained wood trim. Painted exterior surfaces shall be minimized. When exterior exposed wood trim is used the following requirements apply:

3.5.2.1. Exposed wood, such as window trim, door sills, window sills, railings and balusters, trellis, wood fencing, arbors, solar shading devices including louvers, arbors, and trellis shall be treated for rot resistance in accordance with NWWDA Industry Standards I.S.4, Water Repellent Preservative Treatment for Millwork.

3.5.2.2. Exterior surfaces requiring painting shall receive a minimum of one prime coat and two finish coats of paint. Wood trim frames, etc., shall be back primed. Exterior semi-transparent low sheen stains, two coats, are acceptable, where appropriate for wood, plywood, etc.

3.5.2.3. Existing exterior stair treads and landings shall be provided with non-slip type treads. Exposed wood rails and trim shall be treated to deter damage from (moisture decay and termite infestation).

3.6. Windows and Doors. Windows and glazed door (50% or more glass) units shall meet the following standards and must be certified by an independent testing laboratory. . **Windows identified as AT/FP (Anti-Terrorist/Force Protection) windows shall meet minimum requirements contained in the AT/FP-Seismic Report.** Windows that slide (double-hung, single-hung, and horizontal sliding) and glass exterior doors shall meet the standards for hung units. Standards for casement windows shall apply to all hinged or fixed windows. Other window types may be used if they have been tested and conform to the standards for hung windows. **Window frames shall conform to the AT/FP-Seismic Report.** The contractor will provide the manufacturer's certification that the window provided meets the following test requirements:

3.6.1. Windows and Sliding Glass Doors.

3.6.1.1. Required Tests. Hung units will meet a National Fenestration Rating Council (NFRC) design pressure rating of 25. Casement windows will meet NFRC design pressure rating of 40. Evidence of passing the following specific tests and minimum standards are required to achieve these design pressure standards.

3.6.1.1.1. Structural Testing. Using ASTM E330, test results shall demonstrate no glass breakage, damage to hardware, or permanent deformation that would cause any malfunction or impair the operation of the unit. Residual deflection of any member shall not exceed 0.4% of its span. Hung windows shall be tested at pressures of 1796 Pa (37.5 lb/ft^2), and casement windows shall be tested at pressures of 2873 Pa (60.0 lb/ft^2). **Windows identified as AT/FP windows shall meet minimum requirements contained in the AT/FP-Seismic Report.**

3.6.1.1.2. Operating Force. The force necessary to unlatch and open units shall not exceed 13.6 k (30 lb) for hung units and 15.9 k (35 lb) for casements.

3.6.1.1.3. Air Infiltration. Using ASTM E283, leakage rate shall not exceed .65 l/min/m^2 (0.25 ft^3/min/ft^2) for hung units and .39 l/min/m^2 (0.15 ft^3/min/ft^2) for casements, at a test pressure of 7.66 k/m^2 (1.57 lb/ft^2).

3.6.1.1.4. Water Penetration. Using ASTM E547, no leakage shall be evident when tested in three, five-minute cycles with a one-minute rest period between cycles at 18.3 k/m^2 (3.75 lb/ft^2) for hung units and 29.3 k/m^2 (6.0 lb/ft^2) for casements.

3.6.1.1.5. U-Value. U-values shall be calculated using ASTM E1423, and NFRC 100-91.

3.6.1.2. All windows above the ground floor shall be designed for cleaning both sides of the glass panes from the interior. All windows shall be secured with a positive locking device from the interior.

3.6.1.3. Aluminum windows and trim shall have an architectural class II anodized finish (0.4 to 0.7 mil thick) in accordance with Aluminum Association Standards for Anodized Architectural Aluminum..

3.6.2. Sliding glass doors. Sliding glass doors shall have insulated steel, vinyl clad wood, or thermal aluminum frames conforming to the above requirements. Finish shall be factory applied and conform to 44-C-22431 in accordance with the requirements of the National Association of Architectural Metal Manufacturers (NAAMM) Metal Finishes Manual. Glass shall be laminated. glass. Sliding panels shall be equipped with screens having extruded aluminum tubular frames mitered at corners, channel-shaped corner angle reinforcement and nylon bottom rollers. Doors shall have interior operated latch, and securing pin or throw-bolt in frame. Screening shall be nonferrous.

3.6.2.1. Secondary locking devices shall be provided for all sliding glass doors. Provisions shall be made so that the sliding door cannot be removed from the track when the door is in a locked position. Sliding door shall slide on the inside of the fixed glass panel.

3.6.3. Where glass extends to floor or to within 457 mm (18 inches) of the floor or exterior lockset, it shall be fully tempered safety glass. **Windows identified as AT/FP windows shall meet minimum requirements contained in the AT/FP-Seismic Report.**

3.6.4. **Laminated glass shall conform to the AT/FP-Seismic Report.** Glazing for windows at bathrooms shall be patterned or figured.

3.6.5. Interior window stools may be solid-wood, paint-grades with a minimum thickness of 19-mm (3/4-inches). Ceramic tile sills are preferred in masonry construction.

3.7. Screens. Fiberglass screens shall be provided at all operable sashes and sliding doors. Screens shall be nonferrous, of window manufacturer's standard design. Fiberglass insect screens, 18 x 16 mesh size, shall be provided for all windows and sliding glass doors and should be the window or door manufacturers standard design for use with the windows and doors being provided. Insect screen frames shall be removable type for easy cleaning.

3.8. Window Treatments. Provide 25 mm (1 in.) mini-blinds at windows and glazed hung doors. Color shall be manufacturers standard off white, and shall be coordinated with wall color.

3.8.1. Only traverse rods shall be provided at all exterior sliding glass doors. Miniblinds shall be provided for all windows. Solid wood backing shall be provided at all openings for proper anchorage of the traverse rods, and miniblinds.

3.8.2 Miniblinds shall be provided for all other windows not covered under paragraph 3.h.(1) above.

3.9. Exterior Doors. Exterior doors shall be solid core wood (lumber-core only) and shall have exterior glue. Exterior door frames shall be wood or hot-dip galvanized steel with G90 coating. All exterior doors

opening to stoops or walks shall be flush. Stoop shall have maximum level change from interior slab IAW UFAS .

9.9.2. Exterior entry doors to utility rooms and mechanical rooms shall be hot-dip galvanized steel with G90 coating.

3.9.3 Interior doors. Interior doors shall be 2050 mm (6 ft -8 in.) in height by 35 mm (1-3/8 inches) thick, hollow core wood. Wood doors will be painted. Interior doors shall be provided in accordance to standard construction and design practices.

3.10. Builders Hardware. Hinges, locks, and latches will comply with the specifications indicated in Table 5-11, and the following subparagraphs.

3.10.1. Entrance door hardware shall be bored-type conforming to ANSI A156.2, Series 4000, Grade 1 for exterior doors, Grade 2 for interior doors.

3.10.1.1. All swinging doors shall have a wall mounted door stop. Hinges acting as door stop or closer and door mounted stops are not acceptable. Provide solid wood backing in the stud wall cavity for wall mounted door stops.

TABLE 5-11 - HARDWARE SPECIFICATIONS

Hardware Type/ Specification	Specific Requirements
Hinges ANSI A156.1	Hinges shall be 115 mm x 115 mm (4-1/2 in x 4-1/2 in) solid brass ball bearing (equal or similar to Stanley FBB179) at exterior doors other than screen doors, and with nonremovable pins or safety studs if outswinging. Hinges shall be 90 mm x 90 mm (3-1/2 in x 3-1/2 in) at interior doors.
Locks & Latches ANSI A156.2	Bored deadlock, Grade 1, at exterior doors. Grade 2 at interior doors. Provide lever handles, aluminum, or stainless steel.
Auxiliary Locks ANSI A156.5	Bored deadlock, Grade 2. Provide matching trim of wrought brass, aluminum, or stainless steel. Provide lever handles.
Interconnected Lock & Latches ANSI A156.12	Grade 2. Provide matching trim of wrought brass, aluminum, or stainless steel.
Closers ANSI A156.4	Series CO2000, Grade 2.
Auxiliary Hardware ANSI A156.16	

3.10.2. Locks and keys. Lock cylinders shall have six pin tumblers and interchangeable cores which are removable by a control key. Provide a master keying system. Locks for each organizational unit, including exterior storage shall be keyed alike. Contractor shall obtain the key bitting report from the hardware manufacturer and provide the report to DPW (Mr. Kimo Kenolio, 656-0644) at the end of the

project. Locks and keys shall conform to the standards and requirements of the Builders Hardware Manufacturers Association (BHMA) listed above.

3.10.3. Weatherstripping/Exterior thresholds. Provide nonferrous metal or vinyl weatherstripping for all exterior doors. Vinyl magnetic weatherstripping is acceptable for metal door. Exterior thresholds shall be nonferrous metal.

3.10.4. Applications. Locks and hinges shall be applied as follows:

3.10.4.1. Exterior hinged doors shall have 1-1/2 pair of hinges, lockset, and an auxiliary lock, or interconnected lock and latch, Hinges with loose pins on out swinging exterior doors will be specified with non-removable pins or safety stud.

3.10.4.2. Exterior bulk storage door shall have 1-1/2 pair of hinges and lockset.

3.10.4.3. Doors in fire-rated walls shall have 1-1/2 pair of ball-bearing hinges, lockset, and closer.

3.11. Exterior Railings. Design of exterior railing shall conform to historic character of Quad F. The design shall be coordinated with the State Historical Preservation Office. Exterior railing materials, including bolts and fasteners, in order of preference, are as follows:

Order of Preference	Railing Materials
1	Stainless Steel, Type 316 (bolts and fasteners)
2	Aluminum, Anodized (AA - Architectural Class II; 0.4 to 0.7 mil coating)
3	Galvanized Steel (painted)

Handrail and guardrails shall be designed such that a sphere 102 mm (4 inches) in diameter cannot pass through any of its openings.

6. GENERAL DESIGN - PLUMBING.

6.1 The entire plumbing system in Quad F shall be removed and replaced. The plumbing system shall be designed and installed in accordance with TI 800-01, TI 800-03, TI 801-1, TM 5-810-5, and the National Standard Plumbing Code (NSPC). Design, installation and testing of the plumbing system shall be in accordance with the National Standard Plumbing Code and Uniform Federal Guide Specification 15400A. Materials and fixtures shall comply with UFGS 15400A. Where required, handicap accessible fixtures shall comply with Uniform Federal Accessibility Standards. Systems which incorporate measures which are designed to increase ease of maintenance or occupant comfort, higher efficiency water heating systems, will be considered preferred.

6.2 When potable cold water piping system in Quad F is being replaced, contractor is responsible for phasing and provision of temporary make up water supply to the chiller system until the new potable cold water system is operational and accepted by the Government.

6.3 Domestic Water Heating System

6.3.1 Sizing of the water heating system shall be in accordance with ETL 1110-3-489 titled "*Domestic Water Heaters for Barracks*". Water heating strategies that are more energy efficient shall be preferred, provided that the life cycle cost for that system shows that it is cost effective.

6.3.2 Proposal shall include a narrative description of the domestic water heating strategy that the proposer intends to use for each facility, 2 page maximum per facility. Narratives shall include criteria listings - manuals, pamphlets, technical books, codes, industry standards, etc. Narratives shall include a brief description of various items of equipment, including catalog cuts that clearly show which product is to be used. Narratives shall include a description of piping systems including type of pipe, insulation requirements, and whether concealed or exposed, including catalog cuts that clearly show which product is to be used. Catalog cuts will not be counted against the 2 page maximum. Proposer may attach sketches or schematic drawings to illustrate each strategy. These sketches or schematic drawings will not be counted against the 2 page maximum. Also describe any preferred items that will be incorporated into the project. Should the proposer choose to use a central domestic hot water production strategy, then the narrative may be 5 pages maximum. Narratives shall include a description of the underground domestic hot water distribution system, if any, including type of pipe, and catalog cuts that clearly show which product is to be used. Should the proposer use desuperheater method as part of the hot water heating strategy, proposal shall be coordinated with Trane Co. to ensure that the desuperheater equipment is compatible with the existing chiller system.

6.4 Pipe shafts will not be allowed in these facilities.

6.5 Sizing of the grease interceptors for this project shall comply with the requirements of the City and County of Honolulu.

6.6 Handling of kitchen waste shall be in accordance with the requirements of the City and County of Honolulu.

6.7 Kitchen equipment shall comply with TI 800-01 and CEGS 11400.

6.8 The following water heaters shall be removed in salvageable condition and turned-in to the Contracting Officer's Representative:

<u>Building 650 (mess hall heaters)</u>

(1) Rheem-Rudd
Model # G91-200
Serial No. RLP0996G00645

(2) Rheem-Rudd
Model # RCD-200-100-1
Serial No. RLP0895G00946

Building 650 (barracks heaters)

(1) Rheem-Rudd
Model # G100-200
Serial No. RLP0197G01345

(2) Rheem-Rudd
Model # G100-200
Serial No. RLP0197G01348

Building 649

(1) Rheem-Rudd
Model # G100-200
Serial No. RLP0598G03603

(2) Rheem-Rudd
Model # G100-200
Serial No. RLP0198G02443

Building 652

(1) Rheem-Rudd
Model # G100-200
Serial No. RLP1297G04285

(2) Rheem-Rudd
Model # G100-200
Serial No. RLP0697G03030

7. GENERAL DESIGN - ELECTRICAL.

7.1 Interior Electrical System

7.1.1. Conformance to Code: The electrical system shall be designed in compliance with the rules and recommendations of ANSI C2, National Electrical Safety Code (NESC) 1997 edition, and NFPA 70, National Electrical Code (NEC) 1999 edition, TI 800-01 Design Criteria, and TI 811-16 Lighting Design.

7.1.2. Electrical Service: Electrical system characteristics for building services shall be 277/480 volts, three-phase, 4-wire, 60 Hertz, grounded neutral.

7.1.3. Overcurrent Protection: Overcurrent protection shall be provided for each feeder. Service entrance equipment for each building shall be grouped together and located in the electrical room. The service entrance equipment shall include sockets for electric watt-hour meters. Provide locking seal on meter socket covers. Meter socket shall be located in an area readily accessible by service personnel. Manual by-pass jumper plates for each socket shall be provided. Meter sockets within a building shall be grouped at one location at the building. Meter sockets shall have a cover plate lock on the locking ring to prevent removal of the locking ring by unauthorized personnel. Service entrance conductors shall be sized in accordance with the National Electrical Code. Service feeders shall be underground.

7.1.4. Loadcenters/Panelboards: Loadcenters/panelboards shall be rated not less than 150 amperes, mounted in the interior walls, and readily accessible. Offset a minimum of 400 mm (16 inches) horizontally back-to-back loadcenters/panelboards. No recessed loadcenters/panelboards are to be located in fire walls. Loadcenters shall have separate neutral and ground buses. Loadcenters/panelboards shall be circuit breaker type installed in painted galvanized steel recessed, dead-front enclosures. Provide at least 25% spare spaces in each loadcenter/panelboard. The Amps Interrupting Current (AIC) rating of loadcenters/panelboards shall be as calculated in the short circuit analysis but shall not be, in any case, less than 10,000 AIC.

7.1.5. Outlet Circuits: Lighting and convenience outlets shall be on separate circuits. Convenience outlets shall be grounded, duplex type, 2 pole, 3 wire, rated 15 amperes at 125 volts, except that outlets provided for specified appliances or equipment shall be of the appropriate type and rating. Receptacles shall be grounded and flush mounted in walls and partitions. All receptacles requiring ground fault protection shall be integral with the receptacle. Outlets on party walls shall be offset 610 mm (24 inches) to maintain integrity of the fire wall and sound deadening rating of the wall. Outlets in Telecommunication Rooms (TR) or closets shall be 2P3W, 20 ampere rated with at least two 20 amp, **dedicated** circuits.

7.1.6. Conduit and Wiring: Conduit and wiring shall not be run in concrete slabs-on-grade. Where runs are below concrete slabs-on-grade and in direct contact with earth or fill, conduit shall be of the coated rigid steel thickvwall conduit, coated intermediate metal conduit or Schedule 40 polyvinyl chloride (PVC) type. Elsewhere, conduit where required shall be either of the galvanized thick-wall conduit, intermediate metal conduit, or electrical metallic tubing (EMT) type, except that EMT shall not be installed in concrete, exposed to the weather or in other wet locations.

7.1.7. Calculations and Drawings: Complete single line diagrams shall be provided with calculations of available short circuits and voltage drops on branch circuits. Lighting calculations shall also be provided. Load calculations for each building shall be provided and conform to Article 220 of the NEC. Illumination levels shall conform to IES standards.

7.1.8. Building Security Lights: Outdoor 70-watt high pressure sodium luminaires shall be provided on the sides of each building to illuminate the perimeter of the building. Quantity and location of fixtures shall be situated to eliminate shadow areas where intruders could remain undetected, yet be coordinated with the architectural features of the structure to minimize spill light into an adjacent building. Luminaires shall be photocell controlled. All luminaires shall be grounded to conform with Article 410 of the NEC and shall be rated for the environment to which the luminaires are exposed. Selection of luminaires shall be

based on energy-savings and aesthetics. Outdoor luminaires shall be UL listed as suitable for wet locations and shall have vandal-proof polycarbonate type lens or otherwise impact resistant plastic lens. All luminaires shall be complete with lamps.

7.1.9. Interior Lighting: The design of interior lighting shall be in accordance with the fundamentals and recommendations of the IES Lighting Handbook, TI 811-16 Lighting Design, and TI 800-01 Design Criteria.

7.1.9.1 Lighting Intensities: Lighting intensities shall conform to those required by the IES and TI 800-01, Chapter 12, table 12-4. The IES intensities were published as minimums for specific tasks. However, the IES intensities shall be considered target design levels not to be changed significantly. The upper lighting levels shall be considered as maximum design levels.

7.1.9.2 Controls: Lighting controls shall be time clock or photoelectric, or both, for general indoor and outdoor lighting. Automatic dimming to supplement day lighting or occupancy sensors may be considered. Dimming systems may be used to reduce voltage and increase lamp life.

7.1.9.3 Efficiency: Interior lighting will be both efficient and color corrected. Color Rendering Index (CRI) of 85 or better and a standard lighting color of 3500 K are required. Fluorescent luminaires shall have rapid start, energy saving, electronic ballasts with sound rating "A". Lamps shall be of low mercury type that meets EPA's TCLP (Toxic Characteristic Leaching Procedure) tests and are classified as non-hazardous waste. For 1220 mm (4 ft) fluorescent light fixtures, provide T8, 32 watt lamps. Polystyrene lens is not acceptable. Acrylic diffusers shall be provided. Recessed fluorescent luminaires shall have 0.026-inch minimum thickness for metal housing. Surface mounted fluorescent luminaires shall have 0.032-inch minimum thickness for metal housing. Luminaires on ceilings less than 2250 mm (7 feet-6 inches) above the floor shall be recessed flush type.

7.1.9.4 Arms Vaults Lighting: Ceiling mounted fluorescent light fixtures shall be provided for the Arms Vaults. The illumination level required for the Arms Vault shall be 75 footcandles (750 Lux).

7.1.10. Smoke Detectors: See section 8. Smoke detectors shall not be located in close vicinity of the bathroom entrance to preclude false alarms. Detectors shall be of the ionization or photo-electric type conforming to the requirements of Underwriters Laboratories Standards No. 217. Detectors shall bear labels, indicating compliance with standards, by a recognized independent laboratory that maintains periodic inspection of production and testing of the detectors provided.

7.1.11. Door Chimes: Push buttons shall be provided at front entrances to each living unit. The system shall include wiring, push buttons, transformer and chimes. System shall be designed for operation at less than 50 volts. Splices in wiring shall be made only where they will be accessible upon completion of the building.

7.1.12. Branch Circuits and Convenience Outlets: Provide a minimum of one general purpose 120 volt, 20 ampere receptacle outlet in each room. In rooms where walls exceed 3 meters, provide an additional duplex outlet for each additional 3 meters of wall or fraction thereof. Receptacle spacing shall not exceed 3 meters. The general purpose receptacles are in addition to the special purpose and dedicated for special equipment. Each LAN workstation shall be provided with an additional well-defined adjacent duplex receptacle on an independent single phase (20 amp, 120 volt) circuit having not more than four duplex receptacles and a non-shared neutral. Where a 20 ampere, 120 volt receptacle is incorporated in the same metal box with a television, or LAN outlet, a partitioned metal box with separate power and signal conduits shall be provided. Provide independent receptacle circuits for FAX and copy machine equipment and laser printers and coordinate the locations with the users. Ground fault circuit interrupter (GFCI) receptacles shall be 15A, 120V w/test and reset button integral with the receptacle. GFCI receptacles shall not be used in "feed thru" applications to protect downstream receptacles on the same branch circuit.

7.1.12.1. Bathrooms: A duplex, ground fault circuit interrupter (GFCI) receptacle shall be provided adjacent to the lavatory. Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuit shall not have other outlets.

7.1.12.2. Hallway outside bedrooms. For hallways of 3000 mm (10 feet) or more in length, at least one duplex receptacle shall be provided.

7.1.12.3. Entrance. A weatherproof, duplex, ground fault circuit interrupter (GFCI) receptacle shall be provided near each entrance to each building.

7.1.13. Non-Linear Loads: In all areas where nonlinear load type equipment predominates such as computers, printers, uninterruptible power supply (UPS), motors with variable speed drives, electronic ballasts and dimmers and other similar loads, ETL 1110-3-403, "Electrical Power Systems for Nonlinear Loads" dated 30 June 1989; IEEE Std 1100 "Powering and Grounding Sensitive Electronic Equipment", IEEE Std. 519, "Practices and Requirements for Harmonic Control in Electrical Power Systems" shall be used as design guides. Additionally, the use of 75 or 90 degree C (minimum) terminals and insulated conductors is required and shall be so stated in the project and identified in the RFP documents. Use 75 degree C conductors on circuits with protective device terminals rated for 60 degree C is inappropriate. National Electrical Code (NEC) and Underwriter's Laboratory (UL) rules and instructions shall be followed in applying the ampacity tables in the NEC beginning with Table 31-6. Since virtually all electrical equipment that meets the approval required by article 110-2 of the NEC is UL listed, the equipment must be installed in accordance with UL instructions. The basic rule of the UL Electrical Construction Materials Directory states that, in general, "the termination provisions are based on the use of 60 degree C ampacities for wire sizes No. 14-1 AWG and, 75 degree C ampacities for wire sizes Nos. 1/0 AWG and larger, as specified in **Table** 310-16 of the National Electrical Code." Higher rated conductors than specified may be used if the size is based upon the previous statements. Panelboards and loadcenters serving nonlinear loads shall have double-rated neutral busses. Motors connected to the same power source as nonlinear loads shall be upgraded in size similarly. True RMS sensing meters, relays, and circuit breaker trip elements shall be used with nonlinear loads.

7.1.14. Transformers: Transformers and dielectrics shall be selected and applied in accordance with ETL 1110-3-412 "Transformer Application Guide". For those areas with high nonlinear loads, "K" factor rated transformers are required. Provide a schedule identifying the "K" factor rating for each area. Ratings shall be based upon type of load served. Interior transformers having a primary voltage less than 600 volts shall be of the ventilated-dry-type and shall not exceed 500 kva capacity. Heat load calculation shall be provided to ensure temperature rise is acceptable.

7.1.15. Wiring: Conductors shall be copper. Aluminum conductors are not allowed. Conductors No. 10 AWG and smaller shall be solid, and those No. 8 AWG and larger shall be stranded. Unless indicated otherwise, all wiring, installed in galvanized rigid steel conduit (GRS), intermediate metal conduit (IMC) or electrical metallic tubing (EMT), shall be 600 volts, type THW, THWN, XHHW or RHW, except that grounding wires may be type TW. The wiring methods in the various parts of the facility must be clearly identified on the contract drawings. Underfloor ducts or raceways or raised floors may be used in electronic data processing (EDP) or automated data processing (ADP) rooms or other similar areas when anticipated changes or large equipment requirements justify their use. Underfloor ducts or overhead raceways for electrical wiring and information systems cabling may be provided in administrative areas with requirement too extensive to be served by wall outlets. Remote-control and signal circuits shall be type TW, THW or TF, No. 14 AWG minimum. Service entrance cables shall comply with UL 854. All wiring shall be concealed.

7.1.16. Motors: Motors having a starting current that will cause a 30% transient voltage dip shall have reduced-voltage or current-limiting controllers. The selection of motors and motor controls shall be done in a systematic manner with consideration of the overall efficiency of the system. Motor efficiencies shall meet or exceed the minimum requirements set forth by the Department of Energy where non-proprietary products are available.

7.1.17. Prewired Work Stations: Coordinate early in the design process with the User and the architect concerning the necessary electrical characteristics of the work station wiring systems. In order to facilitate a non-proprietary work station, it may be necessary to provide alternate electrical distribution schemes to match the various methods used in potential supplier's manufactured products. See telecommunications section for telecommunications requirements.

7.1.18. Coordinated Power System Protection: The electrical interior distribution system requires short circuit calculations to ensure proper coordination of the protective devices. This analysis shall be performed in accordance with TM 5-811-14 Coordinated Power Systems Protection. The envelope of coordination for which the proposer is to be responsible must be shown on the drawings and in the design analysis. Special coordination requirements shall be noted on the drawings. Also, situations where complete coordination is not achievable due to device limitations shall also be noted on the drawings and design analysis.

7.1.19. Electronic Security Systems: Electronic security systems shall be designed in accordance with TM 5-853-4 Electronic Security Systems Technical Manual. Arms vaults shall be properly designed for Joint Service Interior Intrusion Detection System (JSIIDS). This limited system is used for interior intrusion detection system (IDS) and consists of a control unit, DTM (a data transmission link such as wire line, fiber optics, coaxial cables, or radio frequency tranmission), balanced magnetic switch, capacitance proximity sensor, grid wire sensor, passive ultrasonic sensor, ultrasonic motion sensor, and a duress sensor**. Telecommunications entrance facilities shall have JSIIDS on their doors.**

7.2. <u>Telecommunications Premises Distribution Systems. (Interior Telecommunication System)</u>

7.2.1 Telecommunications Premises Distribution Systems Design: The premises distribution system (PDS) design shall be in accordance with the Department of Army's Installation Information Infrastructure Architecture (I3A), Design and Implementation Guide, dated 19 May 2000 and the local addendum's to the I3A. **Technical criteria to be used for design and construction shall be taken from the most current references at the date of issue of the Request for Proposals (RFP) and shall only be modified as described herein. Codes and standards specifically referred to and those listed below shall be the minimum acceptable criteria.**

STANDARD NUMBER	DESCRIPTION (STANDARDS ARE ADOPTED FEDERAL GOVERNMENT AND DOD)
ANSI/TIA/EIA-568-B	Commercial Building Telecommunications Cabling Standard
ANSI/TIA/EIA-569-A	Commercial Building Standards for Telecommunications Pathways and Spaces
ANSI/TIA/EIA-570-A	Residential Telecommunications Cabling Standard
ANSI/TIA/EIA-598-A	Optical Fiber Cable Color Coding
ANSI/TIA/EIA-606-A	Administration Standards for the Telecommunications Infrastructure of Commercial Buildings
ANSI/TIA/EIA-607-A	Commercial Building Grounding and Bonding Requirements for Telecommunications
ANSI/TIA/EIA-758-1	Customer-Owned Outside Plant Telecommunications Cabling Standard
TIA/EIA-TSB67	Transmission Performance Specifications for Field testing of Unshielded Twisted-Pair Cabling Systems
TIA/EIA-TSB72	Centralized Optical Fiber Cabling Guidelines
TIA/EIA-TSB75	Additional Horizontal Cabling Practices for Open Offices
TIA/EIA-TSB95	Additional Transmission Performance Guidelines for 4-Pair 100 Ω Category 5 Cabling
* TSB = Telecommunications Systems Bulletin	

7.2.1.1 Features of the premise wiring system are as follows:

a. Prewiring of the building in accordance with Federal and National Standards i.e. Telecommunications Industry Association (TIA) and Electronic Industries Association (EIA) documents.

b. Use of 4 pair, 24 AWG, solid conductor, 100 ohm, unshielded twisted-pair (UTP), thermoplastic jacketed, category 5e or better rated copper cables that meet ANSI/ICEA S-80-576 is required for horizontal cabling except where fiber optic cables (FOC) are used or required. All terminations shall be wired in accordance with EIA/TIA T568A.

c. Use of distribution devices, such as patch panels or 110 Blocks shall be installed with wire management devices. RJ21X or 66 Blocks shall not be used.

d. Star wiring architecture from the distribution device is required.

e. A minimum of one horizontal **category 5e** cable shall be installed into each barracks room. **Service will be provided by others.**

f. A minimum of two horizontal cables shall be installed at every outlet. At least one blue sheath/outlet and one green sheath/outlet shall be placed.

g. Category 5e telecommunication **outlets** shall be configured in the 586A **configuration**.

h. Use of an auxiliary disconnect outlet if necessary

i. Grounding shall be in accordance with ANSI/TIA/EIA 607 or 758.

7.2.2. Telecommunications Outlets: Telecommunications outlets shall be 8 position, Category 5e flush mounted type, wired in the T568A configuration. Each outlet shall have the designated number of 8 conductor, Category 5e cables in a concealed 1" or larger EMT conduit. Cabling methods shall comply with the appropriate ANSI/EIA Standard. Cabling and jacks shall be Category 5e and of high quality. **All telecommunications outlets shall have a factory made color identification device so that all users can easily identify voice (blue), data (green), or special circuits (yellow).**

7.2.3. Telecommunications Rooms: **A telecommunications** entrance facility will be placed in each building on the ground floor and with an external door. Besides the main entrance, a telecommunications room shall be placed for every 10,000 sf or thereof. All telecommunications rooms or entrance facilities shall be keyed differently and with high security locks, and shall have "Telecommunications" permanently labeled on the door. **Telecommunications entrance facilities shall have JSIIDS on their doors.** The minimum TR size shall be in accordance with I3A, ANSI/TIA/EIA-569-A, and the local telecommunications requirements. Four 103 mm (4-inch) conduits with MuleTape shall be extended from the telecommunications entrance facility into the underground telecommunications distribution system and tied off at the first maintenance hole or handhole. Those conduits supporting fiber optic cabling will utilize Maxcell (or equal) and not require MuleTape. The number and size of the telecommunications rooms and entrance facilities shall be coordinated with DOIM's Infrastructure Management Group.

7.2.4. Conduit and Cabling: Contractor shall provide minimum 25 mm (1") conduits, complete with telecommunications cables and standard T568A modular jack outlets for telecommunications service. Provide each outlet with a cable in conduit routed directly to the telecommunications room. No section of conduit shall contain more than two 90 degree bends between pull points or pull boxes. During cable installation, the rated cable pulling tension shall not be exceeded and cable shall not be stressed such that twisting, stretching, or kinking occurs. Conduit and wiring shall not be run in concrete slabs-on-grade. Where runs are below concrete slabs-on-grade and in direct contact with earth or fill, conduit shall be of the coated rigid steel thickwall conduit, coated intermediate metal conduit or Schedule 40 polyvinyl chloride (PVC) type. Elsewhere, conduit where required shall be either of the galvanized thickwall conduit, intermediate metal conduit, or electrical metallic tubing (EMT) type, except that EMT

shall not be installed in concrete, exposed to the weather or in other wet locations. Use of flexible plastic or metallic conduit is prohibited.

7.3. **Interior Cable Television System.**

7.3.1. Television Outlets: Flush mounted Television (TV) outlets shall be located as required by the user. Outlets shall be Type F female plugs. The outlets shall be prewired and pretested. For RG-11 outlets, use 4" x 4" x 2 ¼" D outlet box w/ ½" minimum rise.

7.3.2. Cabinet: A television terminal cabinet for each building shall be provided and installed in the Telecommunications Room. Coordinate minimum size of cabinet and the type of termination requirements with Oceanic Cable and Verizon Media Ventures. Each terminal cabinet shall be provided with a 19 mm (3/4-inch) termite treated plywood backboard and an insulated #6 AWG copper ground conductor with 900 mm (3 ft) slack in each cabinet. The cable in conduit shall terminate to a common terminal board in the television terminal cabinet or as mutually agreed by Oceanic Cable and Verizon Media Ventures. The cover for the cabinet shall be provided with means for padlocking, and shall be permanently labeled "Television." Final location of the television terminal cabinet shall be coordinated and mutually approved by Oceanic Cable and Verizon Media Ventures. For each building, provide a conduit from the cabinet to the roof of the building as a provision for cable installation from antenna to cabinet by Verizon Media Ventures to preclude Verizon Media Ventures from routing exposed cable. Conduit shall be routed from cabinet concealed in wall up to roof line where it may be routed exposed by penetration of the roof. Coordinate with Verizon Media Ventures and provide appropriate weatherproof transition fitting from conduit to cable.

7.3.3. Conduit and Wiring: For each building, all CATV cable shall be installed in a conduit. For Oceanic Cable and Verizon Media Ventures, 75 ohm, RG-6/U, black, non-messenger, tri-shield, 80% aluminum braid, PVC jacketed coaxial cable shall be used for cable lengths under 200 ft. For cable lengths greater than 200 ft, the CATV cable shall be 75 ohm RG-11/U, bonded foil, shielded type which includes an inner layer of laminated tape of aluminum foil bonded to the conductors insulation with a layer of adhesive plus 60% aluminum braid, PVC jacketed coaxial cable. Conduit and wiring shall not be run in concrete slabs-on-grade. Where runs are below concrete slabs-on-grade and in direct contact with earth or fill, conduit shall be of the coated rigid steel thick-wall conduit, coated intermediate metal conduit or Schedule 40 polyvinyl chloride (PVC) type. Elsewhere, conduit shall be either of the galvanized thick-wall conduit, intermediate metal conduit, or electrical metallic tubing (EMT) type, except that EMT shall not be installed in concrete, exposed to the weather or in other wet locations. Use of flexible plastic or metal conduits are prohibited. All CATV conduit shall be concealed. Type of cable, type of tap-offs or splitters, and outlet boxes shall be coordinated with Oceanic Cable and Verizon Media Ventures. The following is Oceanic Cable conduit capacity guidelines: ¾"C = 1 to 2 each RG-6 w/ pullwire, 1-1/4"C = 1 to 4 each RG-6 w/pullwire, 1-1/2"C = 1 to 5 each RG-6 w/pullwire.

7.3.4. All inside wiring shall be identified and tagged with the building number, room, and outlet designation. All inside wiring shall be homerun from the backboard/TV cabinet in the Telecommunication Room to the TV outlet in the room. Refer to RFP drawings for Typical Riser Diagram.

7.3.5 The proposer is advised that if the CATV equipment is located in a room accessible to the building occupants, Oceanic requires CATV cabinets. Oceanic will provide CATV cabinets to the proposer and the proposer shall install. If the CATV equipment is to be located in a secured locked room not accessible to the building occupants, Oceanic will place the necessary CATV equipment on the proposer provided backboard and CATV cabinets will not be required in this case. Also note that duplex 4" square receptacles are required at the CATV cabinet or backboard. The number of receptacles is to be determined by Oceanic upon reviewing the plans. If multiple receptacles are needed, space receptacles 6" to 8" apart. Refer to Attachment "Exist CATV Equipment for Bldg 649" and "Exist CATV Equipment for Bldg 650, 651, and 652".

7.3.6. Coordination with Oceanic Cable and Verizon Media Ventures: The Contractor is advised that both Oceanic Cable and Verizon Media Ventures require drawings to be submitted for approval which show at a minimum, locations of outlets and boxes, routes, types and sizes of supporting facilities. The Contractor is also advised that these companies may decline to review drawings which they consider inadequate in detail. The Contractor shall be responsible for coordinating with Oceanic Cable and Verizon Media Ventures to ensure what is proposed meets all their requirements. If any of Oceanic Cable and Verizon Media Ventures requirements are not met, the Contractor shall provide what is required at no cost increase to Oceanic Cable, Verizon Media Ventures, and/or the Government. The Contractor shall provide one week notice before conduit installation begins. Oceanic Cable point of contact is Mr.Dean Yonezawa, (808) 625-8456; Verizon Media Ventures point of contact is Mr. Richard Filanc, (808) 832-6590.

7.4 Exterior Electrical Distribution System

7.4.1. General: TM 5-811-1, Electrical Power Supply and Distribution provides baseline design criteria, standards, policy and guidance for the design of the electrical power supply and distribution systems. Designs shall be compatible with existing construction provided this does not conflict with criteria, standards and policy in TM 5-811-1.

7.4.2. Codes: Electrical systems and installation requirements shall adhere to the current editions of ANSI C2, National Electrical Safety Code, NFPA 70, National Electric Code, and TM 5-811-1 Electrical Power Supply Distribution. In addition, transformers shall be installed in accordance with the guidance provided in MIL-HDBK 1008C, Fire Protection for Facilities Engineering, Design, and Construction.

7.4.3. Standards: All equipment, materials and appurtenances provided under this contract shall be suitable for the intended application and shall conform to the current edition of applicable standards of one or more of the following:

National Electrical Manufacturer's Association
American National Standards Institute
Insulated Power Cable Engineers Association
American Society for Testing and Materials
Institute of Electrical and Electronics Engineers.
Underwriters' Laboratories, Inc.

Where no such standards exist for any product provided under this contract, the Contractor shall demonstrate the suitability of the product, for the application intended, to the satisfaction of the Contracting Officer.

7.4.4. Grounding: All exposed non-current carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductors and the neutral conductor of the wiring system shall be grounded, except where specifically indicated otherwise. The ground connection shall be made as required by Article 250 of the NEC. Where ground rods are required, they shall be 19 mm (3/4-inch) by 3000 mm (10-foot) copper-clad steel driven so the top is 150 mm (6 inches) below grade. Rods shall be tested for compliance with NEC ground resistance requirements prior to connection.

7.4.4. Locks: All enclosed electrical equipment shall be equipped with padlocks and furnished with two keys with each lock. All locks shall be master keyed.

7.4.5. Ducts: A minimum of one spare duct shall be provided for each duct line. Duct lines shall not pass beneath any building structures. Similarly, building structures shall not be constructed over any duct line. Primary conductors shall be in concrete encased thin-wall PVC ducts, routed through manholes. Electrical secondary, **telecommunication,** and cable television cables or conductors shall be non-encased direct burial ducts, except those ducts installed under roads or concrete driveways or other paved areas exceeding 1524mm (5 feet) in width which shall be encased with a minimum of 76 mm (3

inches) of concrete around each duct. Such encasement shall extend a minimum of 1524 mm (5 feet) beyond the edge of the road or paved area. Provide duct seal for where cable enters ducts and covers on spare duct openings. Field cuts requiring tapers shall be made with proper tools and match factory tapers. After an electrical duct line is completed, a standard flexible mandrel shall be used for cleaning followed by a brush with stiff bristles. Mandrels shall be at least 12 inches along and have diameters ¼ inch less than the inside diameter of the duct being cleaned. For telecommunication ducts, the size of the mandrel shall be as DOIM specifies. For cable television ducts, a rigid 12 inch mandrel with diameter ¼inch less than the inside diameter of conduit shall be used for ducts larger than 53 mm (2 inch). A flexible mandrel with a diameter ¼inch less than the inside diameter of conduit shall be used only for 53 mm (2 inch) ducts. Mandrels shall be provided by Oceanic Cablevision only for final testing of CATV ducts. A coupling recommended by the duct manufacturer shall be used whenever an existing duct is connected to a duct of different material or shape. If burrs or obstructions are encountered in electrical, telecommunication, or cable television ducts, that section of the duct shall be replaced.

7.4.5.1. Concrete Encased Ducts: The encasement shall be a minimum of 76 mm (3 inches) of concrete around each duct. Separators or spacing blocks shall be made of steel, concrete, plastic, or a combination of these materials placed not further apart than 1219 mm (4 feet) on centers. Ducts shall be securely anchored to prevent movement during the placement of concrete and joints shall be staggered at least 152 mm (6 inches) vertically.

7.4.5.2. Nonencased Direct Burial Ducts: Where bottoms of trenches comprise materials other than sand or stone-free earth, 76 mm (3-inch) layers of sand or stone-free earth shall be laid first and compacted to approximate densities of surrounding firm soil before installing ducts in direct-contact tiered fashion. Joints in adjacent tiers of duct shall be vertically staggered at least 152 mm (6 inches). The first 102 mm (4-inch) layer of backfill cover shall be sand or stone-free earth compacted as previously specified. High-tiered duct banks shall use a wooden frame or equivalent form to hold ducts in alignment prior to backfilling. Selected earth at duct banks shall be thoroughly tamped in 102 mm to 152 mm (4- to 6-inch) layers. Burial depth of non-encased ducts for cables with a rating of 600 volts or less and for telephone/television cables shall be a minimum of 610 mm (24 inches). Where non-encased ducts for telephone/television cables share the same trench with ducts for secondary cables with a rating of 600 volts or less, the ducts shall be separated not less than 305 mm (12 inches).

7.4.5.3. Duct Line Markers/Plastic Marking Tapes: Duct line markers shall be provided at the ends of long duct line stub-outs or for other ducts whose locations are indeterminate because of duct curvature or terminations at completely below-grade structures. A 5-mil brightly colored plastic marking tape not less than 152 mm (6 inches) in width and suitably inscribed at not more than 3048 mm (10 feet) on centers with a continuous metallic backing and a corrosion resistant 1-mil metallic foil core to permit easy location of the duct line, shall be placed approximately 305 mm (12 inches) below finished grade levels of such lines.

7.4.6. Conductors: All conductors shall be copper.

7.4.7. Nameplates: Each primary circuit breaker, secondary switchboard or switchgear, and secondary circuit breaker panel shall be identified with a laminated phenolic plastic nameplate. Each primary and secondary feeder shall be identified with a fiber or a non-ferrous metal tag.

7.4.8. Point of Connection: The electrical point of connection for Quad F shall be an existing manhole located at the corner of Waianae Avenue and Lewis Street. Please refer to RFP drawings for exact location.

7.4.9. Outages: The Contractor shall initiate requests for outages no less than 45 calendar days prior to any interruption of service in the existing electrical system. Written requests shall be forwarded to DPW via the contracting Officer. Switching shall be performed by DPW authorized personnel.

7.4.10. System Design: Provide new electrical distribution system as necessary and connect to the existing primary electrical system. The distribution system shall be underground for both primary and

secondary conductors. The primary system shall be a radial feed and shall be compatible with the system of which it becomes an extension. Loads on the primary system shall be distributed evenly on the three electrical phases. A multiple grounded neutral conductor shall be routed with the phase conductors. Tag all cables to identify phases. All electrical materials and equipment shall be rated for future operation at 12.47 kV, although the current operation shall be at 6.8 kV line-to-line. The existing nominal system is 7.2 kV, 3-phase, delta with grounding transformers at the Base substation. New distribution systems and extensions of existing system shall provide for proper coordination of protective devices. Coordination studies shall be part of the design analysis. Refer to TM 5-811-14, Coordinated Power Systems Protection for guidance on protective coordination studies and the selection of protective devices.

7.4.11. Calculations and Diagrams: Complete single line diagrams shall be provided with calculations of available short circuit currents at each transformer and circuit breaker panel; loads on all transformers and feeders; and voltage drops on primary lines and secondary services. Illumination and uniformity calculations for multipurpose courts shall also be provided. Diagrams, calculations, and drawings shall be prepared under the supervision of a United States registered professional electrical engineer.

7.4.12. Voltage Drops: The length of secondary distribution service laterals from the unit substation to the building service entrances shall be minimized. The voltage drop from the unit substation to each building's service entrance equipment shall not exceed 3%. The voltage drop from the service entrance equipment to the farthest outlet of lighting, power, or combination of such loads shall not exceed 5%.

7.4.13. Demand Loads: A separate demand load calculation shall be provided for each building. Include catalog cuts of the electrical data for the HVAC equipment that was selected by the mechanical engineer.

7.4.14. Primary Cable: Primary cable shall be ethylene propylene rubber insulated, polyvinyl chloride jacketed, 25% copper tape shield overlap. Conductors shall be copper; sizes larger than no. 8 AWG shall be stranded. Cables shall have a voltage rating of at least 15 kV with 133 percent insulation level. Cable shall be #2, #4/0, or 250 kcmil standard sizes. Deviations from these sizes shall be coordinated and approved by Mr. Roger Grace, DPW, phone no. 655-2942, ext. 3011.

7.4.15. Underground Splices: Splices shall be in self-draining, rodent-resistant manholes with traffic rated covers. Primary cable shall be installed without splice in runs of 152 meters (500 ft) or less. "Y" and "T" splices shall not be used. The maximum spacing between manholes shall be 91 meters (300 ft). Primary cables shall be fire-proofed for their entire length within a manhole on an individual cable basis. Fireproofing shall extend at least 25 mm (1 in) into the ducts. Systems shall be listed as a fire protective coating for grouped electrical conductors and shall be suitable for application on the type of medium voltage cables provided. After fully cured, the installation shall be suitable for use where exposed to oil, water, gases, salt water, sewage, and fungus whereby no resulting damage to cable or insulation shall occur.

7.4.16. Secondary Conductors: Secondary underground cables shall conform to UL 854 and shall be copper, type RHH-RHW-USE insulation, cross-linked polyethylene or ethylene-propylene-rubber outer covering. Conductors shall be installed in non-encased PVC thick wall ducts and where practical, located below sidewalks. Secondary cable splices shall be made in splice boxes approved for the purpose and in accordance with the manufacturer's recommendations.

7.4.17. Service Entrance: Only one service entrance per building shall be provided.

7.4.18. Secondary Unit Substation: The unit substation shall be of the outdoor type having the ratings and arrangements that are compatible and suitable for proper operation of the facility. Medium voltage ratings of cable terminations shall be 15 kv between phases for 133 percent insulation level. Provide two primary feeders to the unit substation for back-up or maintenance purposes. Where secondary feeders exit the unit substation, provide tags to indicate building numbers. Pad for the unit substation shall be concrete. The unit substation shall have "Danger High Voltage" signs affixed to all four sides of the

enclosure. The new unit substation shall be located in the same location as the existing and shall be accessible to service personnel for maintenance operations. Area surrounding the unit substation shall be appropriately landscaped to aesthetically blend the unit substation into the neighborhood. When necessary, architectural screening may be used to provide a pleasing appearance but the screening must assure no loss in equipment efficiency. Secondary unit substations shall comply with ANSI C37.121 and shall be of the radial type. The new substation shall be sub-assembled and coordinated by one manufacturer and shall be shipped in complete sections ready for connection at the site. Complete sections shall include incoming, transformer, and outgoing sections and, where practicable, shall be shipped as one unit. Enclosures shall be corrosion resistant stainless steel construction with a factory applied Norwood Brown color, Federal Color No. 10045.

7.4.18.1. Incoming Section: Metal-enclosed interrupter switchgear consisting of fused, air-insulated interrupters in series with automatic, visible blade disconnects shall be provided for protection of incoming circuits. Metal-enclosed interrupter switchgear shall comply with IEEE ANSI/IEEE C37.30 for load-interrupter switches, NEMA SG-2 for power fuses and shall be of the outdoor no aisle type that meets or exceeds the requirements of the applicable publications listed. Switch construction shall be of the manually-operated, “OPEN-CLOSED” air insulated load interrupter type equipped with a stored energy operator for quick-make quick-break to make operating speeds independent of manual switch operations. Suitable bus or lug connections shall be provided to mount slip-on medium voltage cable terminations for cable entering via conduit from below. Fuses shall be of the current limiting type. Fuses shall be sized approximately 150 percent of the transformer full load current rating. Three sets of spare fuses shall be provided to DPW. Identify the following switch ratings in the design and specifications:

a). nominal voltage,
b). rated maximum voltage,
c). maximum symmetrical interrupting capacity,
d). maximum asymetrical interrupting capacity,
e). 3-second short time current carrying capacity,
f). rated continuous current, and
g). BIL.

Unless otherwise approved by DPW, manufacturer’s standard devices shall be provided and shall include but not limited to the following:

a). A switch-operating handle with provisions for locking in the open or closed position.
b). A switch mechanical position indicator
c). A key interlock if required.
d). An interface terminal block wired for required exterior connections.

7.4.18.2. Transformer Section: Transformers shall have two separate windings per phase and shall be of the mineral oil-insulated type with high molecular-weight hydrocarbon liquid. Transformers shall be suitable for outdoor use. Liquid-insulated transformers shall comply with IEEE ANSI/IEEE C57.12.00, ANSI C57.12.13 and ANSI C57.12.27 and shall have two 2-1/2 percent full capacity taps above and two 2-1/2 percent full capacity taps below rated voltage. Transformers shall be of the sealed tank type construction with weld-on cover. Accessories shall include a pressure-vacuum gauge, dial type thermometer with alarm contacts, provisions for jacking, lifting, and towing. Transformers shall be sized larger than 10-25% more than the calculated loads.

7.4.18.3. Integral Outgoing Section: Integral outgoing section shall be of the dead-front distribution panelboard/switchboard type or metal-enclosed switchgear type. Each circuit breaker and auxiliary compartment shall have a suitable metal or laminated plastic nameplate with white cut letters at least ¼ inch high on contrasting backgrounds. The panelboard/switchboard type shall be mounted integrally with the transformer and shall consist of metering devices and main and branch circuit breakers mounted in panelboard/switchboard enclosures. Panelboards shall comply with NEMA PB 1. Switchboards shall comply with NEMA PB 2. The metal-enclosed switchgear type shall be of the metal-enclosed drawout circuit breaker type in accordance with IEEE ANSI/IEEE C 37.20.1 and NEMA SG 5. The main

secondary bus of each outgoing section assembly shall include a watt-hour demand meter with the necessary instrument transformers and VT and CT test blocks.

7.4.19. Area Lighting: Area lighting shall be provided at intervals not exceeding 52 m (170 ft) along area walkways not otherwise illuminated, common area walks connecting picnic areas, and at all steps in area walkways. Area lighting shall be provided with HPS lights. Illumination levels and uniformity ratios shall be in accordance with the IES Lighting Handbook. Luminaries shall be actuated by photoelectric control, one photocell per circuit, and supplied from multiple circuits. Light fixtures shall have vandal-resistant polycarbonate type lens and shall be mounted on seamless aluminum poles. Lights, poles, and anchoring shall be designed to withstand a wind loading of 100 MPH.

7.4.20. Roadway Lighting: Existing roadway lighting shall be removed and new roadway lighting shall be provided when Foote Avenue is realigned between Glennan Street and Meigs Street. 250 watt HPS fixtures shall be provided at each roadway intersection and 100 watt HPS lights at intervals not exceeding 170 ft between intersections. Coordinate with DPW on the exact type of fixture to be used. POC is Mr. Roger Grace, 655-2942, ext. 3011.

7.4.21. Parking Lot Lighting Adjacent to Bldg 651 - Existing parking lot lighting shall be reused and reconnected to the new electrical distribution system for Quad F. Refer to RFP drawings for location.

7.4.22. Parking Lot Lighting Across Bldg 650 and along Foot Avenue - Provide new parking lot lighting and connect to the new electrical distribution system for Quad F. Lighting levels and uniformity ratios shall be in accordance with the IES Lighting Handbook. Luminaries shall be actuated by photoelectric control, one photocell per circuit, and supplied from multiple circuits. Light fixtures shall have vandal-resistant polycarbonate type lens and shall be mounted on seamless aluminum poles. Lights, poles, and anchoring shall be designed to withstand a wind loading of 100 MPH. Refer to RFP drawings for location.

7.4.23. Gear Wash/Recreational Facility: Provide general lighting and electrical power for the facility.

7.4.24. Multipurpose Court Lighting: Illumination levels and uniformity ratios shall be in accordance with IES Lighting Handbook for recreational (outdoor) classification. Lamps shall be metal halide for better color rendition. Luminaries shall be actuated by a permissive switch and supplied from a three phase circuit. Light fixtures shall have vandal-resistant polycarbonate type lens and shall be mounted on seamless aluminum poles. Lights, poles, and anchoring shall be designed to withstand a wind loading of 100 MPH.

7.4.25. Metering: Enclosed meter sockets shall be provided for each building having a connected load of 250 kva or more to permit check metering. Enclosures shall be corrosion resistant stainless steel construction with a factory applied Norwood Brown color, Federal Color No. 10045.

7.4.26. Operation and Maintenance (O & M) Manuals: Operation and Maintenance manuals shall be provided for the secondary unit substation. Manuals shall instructions for assembly, installation, operation and maintenance, and spare parts data which provides supplier name, current cost, catalog order number, and a recommended list of spare parts to be stocked. Manuals shall also include data outlining detailed procedures for system startup and operation, and a troubleshooting guide which lists possible operational problems and corrective action to be taken. A brief description of all equipment, basic operating features, and routine maintenance requirements shall be included. Documents shall be bound in a binder marked or identified on the spine and front cover. A table of contents page shall be included and marked with pertinent contract information and contents of the manual. Tabs shall be provided to separate different types of documents, such as catalog ordering information, drawings, instructions, and spare parts data. Index sheets shall be provided for each section of the manual when warranted by the quantity of documents included under separate tabs or dividers. Six copies of these O & M manuals shall be submitted within 7 calender days following the completion of tests.

7.5 Telecommunications Outside Plant.

7.5.1. Point of connection: Infrastructure: Maintenance Hole C7, Fiber Optic Cables: Bldg 550, **ADN**, and Copper Cables: Bldg 255, Main Distribution Frame.

7.5.2. The telecommunications cable and duct distribution shall be underground within the project site. The telecommunications distribution system shall be physically separated from the electrical power distribution system in accordance with the NESC. Exterior telecommunication cables shall be furnished and installed by others. The Contractor shall coordinate with DOIM, through Mr. Edmund Takeya at 438-0189, Infrastructure management Group and Mr. Marion F. Robinson, Jr. at 438-8071 or Mr. James W. Arrowood, to ensure all proposals, designs, and installation requirements meet Federal and local telecommunications standards at the sole expense of the contractor. In addition, the Contractor shall coordinate with Mr. William Aiu, AT&T HITS, to ensure existing telecommunications cables are properly attended to prior to starting building renovation. This coordination shall be required again toward the end of the project to ensure telecommunications **services** are available at facility turn over.

7.5.3. The Contractor shall be responsible for coordinating with DOIM to ensure what is proposed meets Federal and local PUC requirements. If any requirements are not met, the Contractor shall provide what is required at no increase to the Contract price or time of performance.

7.5.4. The Contractor is cautioned that DOIM requires drawings to be submitted which show, at a minimum, locations, routes, types, and sizes of the supporting facilities for the telecommunications system. The Contractor is also advised that DOIM and the commercial vendor may decline to review drawings which it considers inadequate in detail.

7.5.5. ANSI/TIA/EIA 569A Commercial Building Standard for Telecommunications Pathways and Spaces shall be used for maintenance hole, handhole and conduit design. **The underground telecommunication system design must also conform to HITS outside plant practices. Refer to Attachment "Hawaii Information Transfer System-Outside Plant Practices.** Federal standards or local practices shall be the minimum requirement. Commercial vendor products may be used, if they meet or exceed the Federal Standards.

7.5.6. In addition to the requirements stated above, the following shall be provided as a minimum:

7.5.6.1. Details of conduit termination to telecommunications lines on an existing pole or maintenance hole at the point of connection (aerial to underground or underground to underground).

7.5.6.2. Sizes, quantities, type, and locations of handholes, maintenance holes and ducts with MuleTape **or Maxcell flexible innerduct.**

7.5.6.3. Termite treated**, fire retardant, ¾ void-free plywood** backboards and insulated copper, #6 AWG, ground conductors shall be provided in each telecommunications room. **Plywoods shall be painted with two coats of white colored, fire retardant paint on all sides and shall cover two walls.** The ground conductor shall be connected to an ANSI/TIA/EIA compliant busbar in each room. Telecommunications grounding shall meet TIA/EIA-607-1995.

7.5.6.4. **Minimum outside plant duct size shall be 103 mm (4 inches).** Conduits shall be PVC, Schedule 40, encased in 2500 psi concrete. Burial depth shall be, at a minimum, 600 mm (24 inches) measured from the top of the duct. At least one spare 103 mm conduit shall be provided for each distribution pathway. A minimum of two spare 103 mm conduits shall be provided for each trunking pathway. All 103 mm conduits shall have Muletape installed except for those conduits supporting fiber optic cabling. **These** conduits shall utilize Maxcell (or equal) inner ducts. The number and thread color shall be coordinated with DOIM's Infrastructure Management Group, Fiber Optic Manager, **(808) 438-8056.**

7.5.6.5. Maintenance holes shall be equipped with two pulling-in iron and cable racks with arms. Maximum spacing for **maintenance holes** shall be 152 m (500 feet). Maximum spacing between handholes and between handholes and buildings shall be 45.5 m (150 feet). All maintenance holes, and handholes shall be provided with 2400 mm (8 foot) ground rods. All handholes shall be located in sidewalks and all maintenance holes shall be located in roadways.

7.5.6.6. All inside and outside cabling shall be identified and tagged at the terminal, outlet, and at each termination and maintenance hole in accordance with ANSI/TIA/EIA 606-1994, and local numbering conventions, with the following minimum information: a) building and floor number, b). room and outlet designation, and c) cable pair, pair count, AWG.

7.5.6.7. The Contractor is required to follow Federal, Army and Hawaii PUC technical guidance as part **of** this project. Any deviations shall be coordinated through the DOIM's subject matter experts who will coodinate with local service providers. Point of contact at DOIM is Mr. Edmund Takeya at 438-0189. Subject matter experts in the Infrastructure Management Group are Mr. Marion F. Robinson, Jr. at 438-8071 or Mr. James W. Arrowood at **438-8070**.

7.6 Exterior Cable Television System

7.6.1. Point of connection: For Bldgs 650 and 651, the point of connection shall be an existing telecommunication handhole adjacent to Bldg 651. From this handhole, the proposer shall run new underground ducts to Bldg 650 and remove the existing aerial service. Reuse existing ducts to Bldg 651. For Bldgs 649 and 652, the point of connection shall be an existing telecommunication handhole adjacent to Bldg 649. From this handhole, the proposer shall run new underground ducts to Bldg 652 and remove the existing aerial service. Reuse existing ducts to Bldg 649. Refer to Attachment, "CATV Point of Connection".

7.6.2. Space provisions (empty conduits) shall be made, for installation of an underground television cable system. Cables will be furnished and installed by others. Mule tape shall be provided in all empty conduits to facilitate pulling of cables by others. The underground cable television distribution system shall be physically separated from the electrical distribution system in accordance with NESC (ANSI C2). All design and installation requirements shall be coordinated with Oceanic Cable at the sole expense of the Contractor. **The cable television system shall reside in the official telecommunications pathways and spaces except where power is required. Pathways and spaces include maintenance holes, handholes, conduits, and telecommunication rooms.**

7.6.3. The Contractor is cautioned that Oceanic Cable requires drawings to be submitted which show, at a minimum, locations, routes, types, and sizes of the supporting facilities for the television system. The Contractor is also advised that Oceanic Cable may decline to review drawings which it considers inadequate in detail.

7.6.4. **The Contractor is advised that Oceanic Cable has standard drawings for the pull boxes, handholes, and ductlines.** The Contractor may contact Oceanic Cable regarding their standard specifications. The point of contact is Mr. Dean Yonezawa, Oceanic Cable, phone number (808) 625-8456.

7.6.5. The Contractor shall coordinate with Oceanic Cable to ensure what is proposed meets all of that company's requirements. If any requirements are not met, the Contractor shall provide what is required at no increase to the Contract price or time of performance.

7.6.6. The Contractor must provide 1 week notice before conduit installation begins. Point of contact shall be Mr. Moki Place, Oceanic Cable, phone number (808) 625-8378.

7.6.7. In addition to the requirements stated above, the following shall be provided for Oceanic Cable's approval.

7.6.7.1. Details of conduit termination to Oceanic Cable lines on an existing pole or manhole at the point of connection (aerial to underground or underground to underground).

7.6.7.2. Sizes, quantities, type, and locations of pullboxes, handholes, manholes, and ducts with **Mule Tape**. May include power supply with secondary as needed.

7.6.7.3. Sizes and types of terminal cabinets required at each building. A termite treated backboard and insulated copper, #6 AWG, ground conductor shall be provided in each cabinet. The ground conductor, with 900mm (3-feet) excess length in each cabinet, shall be connected to the building grounding system. Cabinet enclosures shall be rated NEMA 3R.

7.6.7.4. Minimum duct size for distribution lines shall be 102 mm (4 inches). Ducts shall be PVC schedule 40 when concrete encased and when direct buried. If practicable, locate below the sidewalks. Burial depth shall be 600 mm (24 inches). Mule **Tape** shall be provided in each duct. See other paragraphs for burial depth and concrete encasement requirements.

7.6.7.5. Maximum spacing of pullboxes/handholes shall be 108m (350 feet). All handholes/pullboxes shall be located in sidewalks and/or planter strips. Maximum distance for CATV service drop cables shall not exceed 150 ft from the Building's terminal cabinet to the pullbox containing the main CATV distribution cables. Exceptions to this requirement will require approval from Oceanic Cable.

7.6.7.6. Minimum duct size to the building shall be 53 mm (2 inches). Ducts shall be PVC Schedule 40 when concrete encased and when direct buried. Mule tape shall be provided in each empty duct.

7.6.7.7. Where applicable, sizes and locations of power supply pullbox shall be as recommended by Oceanic Cable. Power supply, box, pad, and pedestal shall be provided by Oceanic Cable.

7.6.8. Pullboxes: A 600 mm (24 inch) by 1200 mm (48 inch) CATV pullboxes shall be used for this project if necessary. See RFP drawing "24 IN x 48 IN PULLBOX DETAIL". Pullboxes shall be precast concrete with polymer non-skid surfaced two piece covers inscribed with "TV". A minimum of two precast concrete pullbox sections shall be required at each pullbox.

7.6.9. Terminal Cabinets. Terminal cabinets shall be provided. Incoming ducts to the building main terminal cabinet shall be 53 mm (2-inch) PVC schedule 40 when concrete encased and when direct buried.

7.7. Special Utilities and Supplementary Construction. Required connections to the existing utilities shall be completed by the Contractor at no increase to the Contract price even if they are beyond the indicated project boundaries. The Contractor shall coordinate the installation of telephone and cable TV feeders from the points of connection to the buildings with DOIM, Oceanic Cable, Verizon and Verizon Media Ventures, respectively. Connection, pulling, and installation of wire will be done by the respective utility company. The cost of pulling, installation, and connection shall be included in the Contractor's proposal.

7.7.1 Electronic Security Systems. Electronic security systems shall be designed in accordance with TM 5-853-4, Electronic Security Systems Technical Manual. Arms Rooms shall be properly designed for Joint Service Interior Intrusion Detection Systems (JSIIDS). This limited system is used for interior intrusion detection systems (IDS) and consists of a control unit, DTM (a data transmission link such as a voice telecommunications circuit, fiber optics, coaxial cables, or radio frequency transmission), balanced magnetic switch, capacitance proximity sensor, grid wire sensor, passive ultrasonic, ultrasonic motion sensor, and a duress sensor. Telecommunications Entrance Facilities shall have JSIIDS on their doors.

7.8 Cathodic Protection System: Cathodic Protection (CP) is mandatory on buried ferrous metallic structures as described below:

7.8.1. CP systems must be designed to provide protective potential to meet the requirements of the National Association of Corrosion Engineers (NACE) Standard RP-0169, Control of External Corrosion

on Underground or Submerged Metallic Piping Systems, or NACE Standard RP-0185, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems as appropriate.

7.8.2. CP and protective coatings shall be provided for the following buried/submerged ferrous metallic structures regardless of soil or water resistivity:

7.8.2.1. Natural gas and propane piping

7.8.2.2. Fire protection piping.

7.8.2.3. Other structures with hazardous products as identified by the user.

7.8.3. Cast iron pipe shall be treated as follows:

7.8.3.1. For soil resistivity below 10,000 ohm-cm at pipeline installation depth, provide CP, bonded joints, and protective coatings.

7.8.3.2. For soil resistivity between 10,000 and 30,000 ohm-cm at pipeline installation depth, provide bonded joints only.

7.8.4. Copper water service lines will be dielectrically isolated from ferrous pipe. Dielectric isolation shall conform with NACE RP-0286.

7.8.5. For ductile iron piping systems (except for ductile iron piping under floor in soil) conduct an analysis to determine if CP and/or bonded or unbonded coatings are required. Unbonded coatings are defined in ANSI/AWWA C105/A21.5.

7.8.6. The Contractor shall conduct and provide an economic analysis to determine if CP and protective coatings should be provided for gravity sewer lines and the following structures in soil resistivity conditions above 10,000 ohm-cm:

7.8.6.1. Potable water lines

7.8.6.2. Concentric neutral cable

7.8.6.3. Other buried/submerged ferrous metallic structures not covered above.

7.8.6.4. Ferrous metallic piping passing through concrete shall not be in contact with the concrete.